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NATIONAL PETROLEUM NEWS

Volume 34 | June 10, 1942 | Number 23

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Refining Edition

WPB to 'Formalize' Use of NE Steels

War Production Board is expected to formalize the new National Emergency steel specifications which provide for substitution of these NE steels wherever possible to reduce chromium, nickel and other alloy use. Design of refineries for 3-year life urged. Page R-177.

High-Pressure Gas Measurements Told

Procedure and formulas for high-pressure gas measurement from distillate wells are contained in a paper presented at the annual meeting of the Natural Gas Assn. Page R-180.

Steps in Making Rubber from Oil

Simplified flow charts show the different ingredients that go into the manufacture of various types of synthetic rubber. Diagrams were prepared by New Jersey Standard and show the components of Buna N, Buna S, Neoprene and Butyl rubber. Page R-190.

Is OPA Forcing A National Price War?

Editor Warren C. Platt discusses that question in his editorial this week on page 11.

He points out how OPA plainly appears to be trying to protect its present price ceiling by getting oil marketers into such a bitter war for the shrunken gallonage, due to rationing and rubber shortage, that they will keep prices down to ruinous levels—ruinous for the oil industry but "profitable" for OPA.

In setting this anti-American policy, Editor Platt points out how OPA is directly violating the specific instructions of the law creating OPA.

Map Big Scrap Rubber Drive; Success May Spike Rationing

WASHINGTON—A huge oil-industry financed drive to collect scrap rubber, bringing in several thousand tons, may be the answer to the question "How can we avoid nationwide gasoline rationing?" Such a campaign is being mapped out, involving every service station and bulk plant in the country and every member of the oil industry. Petroleum Co-ordinator Ickes suggested the idea to President Roosevelt, who later said he'd like to see just how much could be collected in a "test" drive. Page 3.

P.I.W.C. Proposes Tires-for-All Plan

WASHINGTON — Petroleum Industry War Council proposes program for keeping all mechanically-usable cars on the road for next 6 years, using small amount of new rubber and large amount of reclaimed. P.I.W.C. rubber committee, reviewing situation, shows what will happen to cars on road under varying rubber supply conditions. Page 22.

Banks to Go Easy On Oil Producers

WASHINGTON — Federal bank examining officials have instructed Southwestern bank examiners not to be too critical of oil loans which might seem to be on a slower payout basis at present, according to Charles F. Roeser of I.P.A.A. Producers with good collateral needn't fear foreclosure, he said. Page 20.

FDR Temporarily Halts Rationing For Entire U. S.

WASHINGTON—Furor over nationwide gasoline rationing, climaxed by joint protest of 135 congressmen, brings temporary halt to anticipated announcement of plan. President Roosevelt takes measure under advisement, promising no action will be taken until more information is gathered. Meantime, protests continue to pour in and legislation is proposed demanding the facts. Page 5.

Gulf Area to Have Big Rubber Plants

CLEVELAND — Texas Gulf Coast will have big share of the synthetic rubber program, according to construction plans announced. Many plants for producing raw materials and turning out finished product projected. One of biggest is Humble's $43,000,000 program. Page 15.

NEWS BRIEFS

Special committee named by WPB to study East's oil needs. Page 27.

* * *

Tank car movement to East, Northwest declines, OPC says. Page 27.

* * *

Florida oil co-ordinator urges use of idle barges. Page 27.

* * *

OPC asks District 3 refiners to maintain May runs in June. Page 18.

* * *

South Dakota forms 3 truck pools for 130-hour week. Page 23.

* * *

Truckers ask ODT to clarify policy on 130-hour week. Page 23.

* * *

Shell works on new process to manufacture butadiene. Page 17.

* * *

First "fluid catalyst" unit placed in operation. Page 17.

* * *

Eight independent southwest refiners to build 100-octane plant. Page 17.

* * *

OPC names subcommittee to speed flow of oil to East. Page 24.

* * *

ODT outlines employers' "policy" for settling labor disputes. Page 26.

* * *

Oil compacters to discuss secondary recovery reports. Page 20.

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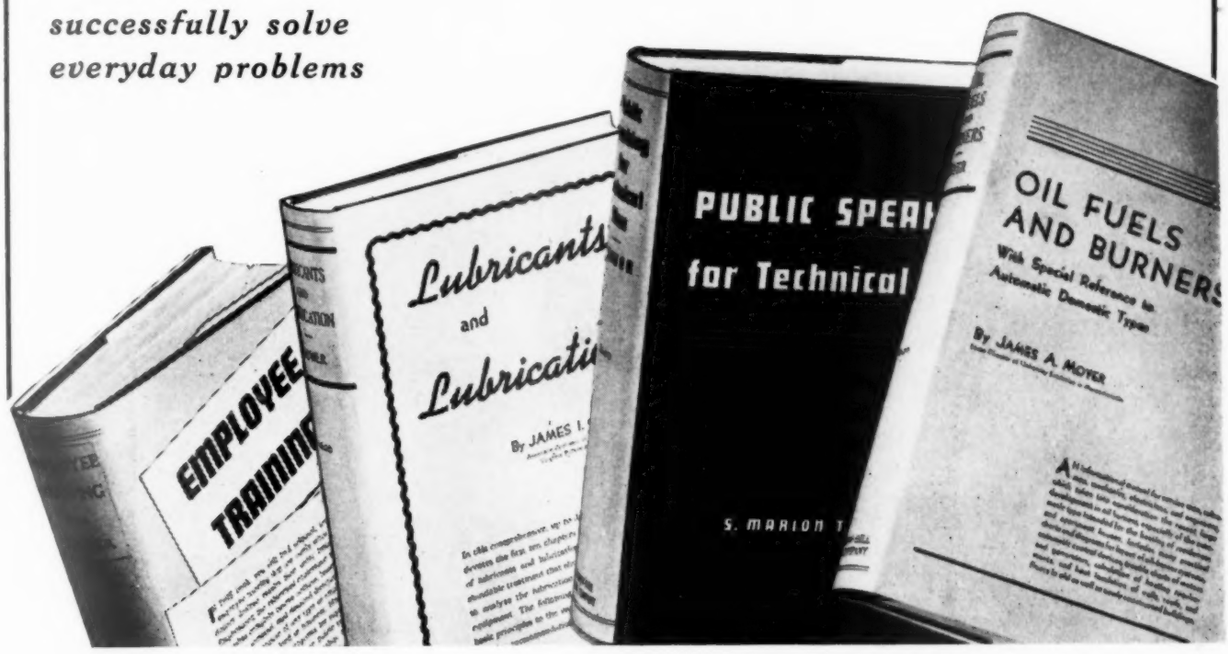

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NATIONAL PETROLEUM NEWS—June 10, 1942—Vol. XXXIV—No. 23

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Curt Davis,

New V.O.M.A. President

● While NPN was interviewing the newly-elected president of the Virginia Oil Men's Assn., Curtis R. Davis, of Richmond, to get some personal details about his life, he happened to glance at the calendar. It was June 4.

"By gosh," exclaimed Mr. Davis, "you know it was just 25 years ago today, right to the day—June 4, 1917—that I enlisted in Uncle Sam's Army to save the world for democracy."

Mr. Davis was only 17 when he enlisted in 1917. Shortly after, he volunteered for immediate service in France with the 42nd (Rainbow) Division then being organized with men from every state included. (Incidentally, the commander of that division was Douglas MacArthur). Arriving in France in 1917, the 42nd Division—including Curt Davis—participated in every major engagement of the A. E. F. Mr. Davis also served 5 months with the Army of Occupation in Germany after the war.

Even now, with a charming wife, a below-80 golf game and thriving oil business, Curt Davis would probably like to be with General MacArthur again. And it wouldn't surprise his friends to see him in an officer's uniform before long.

Known and liked by every oil man in the Old Dominion, a Virginia oil men's convention wouldn't be complete without Curt Davis. His years of association activities have now been climaxed with his election as president of this state group which includes both independent marketers and major company representatives.

Born in Chesterfield County, Va., just across the river from Richmond, Mr. Davis naturally started his career in the oil business at Richmond, with the James River Oil Co. He was with this independent oil jobbing company for 12 years, serving 7 years as its general manager. Then he went with Arkansas Fuel Oil Co. and for two years was Virginia manager for this Cities Service subsidiary. Since early in 1938, Mr. Davis has been a Pure Oil Co. commission distributor for the Richmond area.

Curtis R. Davis

Asked about his hobbies, he says he plays golf (an understatement) but that the oil business is his real hobby. "And some day," he adds, "I may even test out the hair-raising qualities of crude oil."

NATIONAL PETROLEUM NEWS

VOLUME 34 WEDNESDAY, JUNE 10, 1942 NUMBER 23

Damsels in 'Distress' Trap 'Gas' Dealers

NPN News Bureau

NEW YORK—Volunteer women investigators for Office of Price Administration, who urged service station attendants to sell them gasoline without rationing cards—using the plea that they had "left their cards at home"—have reported 175 "clearly indicated cases of violations" of rationing regulations in New York City, Philadelphia and Newark, N. J., OPA office here announced June 8.

OPA said the 175 "violators" have been served notice to appear at public hearings starting June 11 in the 3 cities.

According to OPA, the "hearings" will be conducted in this fashion:

Charges wil be stated and the "violators" asked to affirm or deny them. If affirmed, dealers will be asked for explanation of circumstances. If denied, cases will be put off for court hearings later.

Upon completion of hearings and "substantiation of guilt", OPA said, Price Administrator Henderson will issue suspension orders prohibiting the "guilty" dealers from receiving further deliveries for a stated period. Duplicate orders will be sent to the supplying companies to halt deliveries.

WPB Gets Retread Program For Million Tires Monthly

NPN News Bureau

NEW YORK—Plans for retreading a million tires a month with a substance composed principally of sodium, sulfur and a hydrocarbon compound derived from natural gas have been submitted to War Production Board by Thiokol Corp., Trenton, N. J., and Dow Chemical Co., Midland, Mich., an official of the Thiokol corporation told NPN June 9.

Only half a dozen existing plants would be required for this program, he said. Some conversion would be necessary, but no new construction. The retreading process, he explained, employs a substance composed of polysulfide reaction products and its chief value lies in availability of raw materials.

Tests of tires retreaded with the substance show they will stand up for at least 5000 miles if properly inflated and speed is no greater than 40 m.p.h., the company spokesman said.

Map Big Scrap Rubber Drive; Success May Spike Rationing

NPN News Bureau

WASHINGTON—How much scrap rubber is there in the U. S.?

Answer to that will decide fate of programs for supplying reclaimed rubber tires to nation's 20-odd million essential automobiles.

President Roosevelt wants the answer.

It will help him decide on nationwide gasoline rationing.

The president told his press conference June 9 that he would like to see a two-week "test" campaign to determine how much scrap rubber could be collected throughout the country.

He may have had in mind just such a "test" campaign as has been worked up by the oil industry centering around the filling station and bulk plant.

Oil industry's plan was outlined to the president by Petroleum Co-ordinator Ickes several days prior to the White House press conference statement. It was drafted by Petroleum Industry War Council to tie in with its program for keeping all mechanically-usable cars on the road with a minimum amount of new rubber.

Such a rubber replacement program, however, would require large quantities of scrap rubber. Expectations are that the oil industry campaign would bring in several hundred thousand tons of scrap rubber in two or three weeks.

WPB Has a Plan, Too

Meanwhile, War Production Board is rushing work on a plan for a nationwide rubber scrap collection drive, to begin June 29. Citizens would be called upon to donate their old tires, tubes and other rubber articles to the government.

The P.I.W.C. plan is reported further advanced than WPB's general plan.

And that may explain reports that WPB has frowned upon the P.I.W.C. releasing details of either its tire replacement plan or scrap collection drive.

* * *

Plans for Scrap Rubber Drive Drawn Up

NPN News Bureau

CHICAGO — A nationwide plan for collecting scrap rubber in a "test" campaign to start Monday, June 15, and last three weeks, was being put into final shape here June 9 when NPN telephoned B. L. Majewski, chairman of Petroleum Industry War Council's marketing committee, with word that President Roosevelt had endorsed such a plan.

"That's fine," replied Mr. Majewski, "We're just putting finishing touches on our plan. We are going to recommend to OPC and WPB that it be started next Monday. We can begin our publicity campaign this week-end, if Washington gives us the signal to go ahead.

"We plan to have every man in the oil industry get out and work for this scrap collection, from major company president down. We would ask them to bring their scrap rubber to the corner filling station and we would pay them 1c a pound for it.

"If they didn't want pay for it, then we would pass along to President Roosevelt whatever we got for selling the scrap. And let the president give it to whatever charity he wished.

"Scrap would be collected at bulk plants and shipped wherever needed. We are going to ask state governors, fraternal organizations, automobile clubs and similar organizations to participate."

Earlier in the day, Mr. Majewski's group had broken up its meeting to come out and explain to newspapermen the oil industry's scrap rubber collection program, on which they were working.

East's Ration Plan May Be Delayed

NPN News Bureau

WASHINGTON — Coupon gasoline rationing in East Coast may be delayed beyond July 1, it was learned today, because Office of Defense Transportation wants to revise the forms to obtain more information on motor transportation usage.

It appeared that Office of Price Administration faces 2 alternatives if rationing is delayed beyond July 1.

First, to increase unit value on ration cards.

Second, to find something else on card to punch, such as the "buy war bonds seal", or something else.

Value has not been set for "A" book coupons for passenger cars, but value of "S" coupon has been set at 5 gal., "E" at 1 gal., and "R" at 5 gal. "A" coupon value will be set later. OPA wants to be able to change value at any time. "D" coupon — for motorcycle — will be 40% of whatever "A" value is.

It is considered quite probable, however, that the "A" value will be 4 gal.

Cost 'Pool' Sinks Deeper in the Red

NPN News Bureau

WASHINGTON—While Office of Petroleum Co-ordinator has recommended that eastern suppliers buy from sources with shortest rail hauls, it is not unmindful that this will add still greater burdens to losses sustained by oil companies due to added costs of rail transportation. And OPC is hopeful that some means of easing this burden can be worked out with Office of Price Administration.

Just what course OPA will adopt is not known. But it was recalled that Dr. George W. Stocking, chief of OPA's fuel unit, assured the Petroleum Industry War Council June 9 that some means of offsetting added transportation costs would be worked out and put into effect by OPA.

'Pool' is Deep in Red

The East Coast transportation "pool" will require $37,000,000 to balance its books as of end of June. And managers of the "pool" figure that to provide this amount would require relief in the equivalent of additional price increases, as follows: gasoline, 0.8c per gal.; distillate fuel oils, 3.4c per gal.; and heavy fuel oils, $1.00 per bbl.

Two of the ways suggested of meeting this situation, so that eastern suppliers would be encouraged to buy in the Mid-West and thus cut down the tank car turn-around were:

Recognize the differential between the mid-western price "ceiling" and the Group 3 or other southwestern "ceiling" as "freight" and reimburse suppliers for this differential.

Have mid-western suppliers figure every price, whether in Ohio, Chicago or elsewhere, on a basis of Group 3 plus rail freight.

East's Oil Jobbers Air Indignation At OPA's 'Socially Desirable' Idea

By NPN Staff Writer

CLEVELAND — East coast jobbers don't like Office of Price Administration's plan of operating the oil industry with the aid of "marketing experts" who will "counsel" them on how to run their business, as revealed in recent official OPA speeches (*NPN May 27, p. 3*).

In fact, as this writer found out during a recent trip through the East, these jobbers won't talk to a stranger until they are quite certain that he is not a forerunner of a crew of government "experts" looking them over to see if their business is "socially desirable."

Take Elizabeth, N. J., for instance. A large independent jobber there summed up in a few words how he felt about OPA's plans for sending around "experts" to dictate the policies of his operations.

"After being kicked around by events over which I have no control, being depressed by prophets of doom, apparently now I am to be further bewildered by government 'experts' telling me how to run my business after doing a pretty good job of it myself without assistance for the past 20 years."

Calls Plan 'Ridiculous'

In New Haven, Conn., one of the largest jobbers in the state, and one of the oldest in point of service, indicated that of all things that had ever happened, if and when these experts started functioning, this would be the most ridiculous. This jobber half seriously said that if the government could do a better job of running his business than he could, he would be inclined to tell them to take it.

In nearby West Haven another large jobber said that he would go the government one better and pay any of these "experts" twice their salary if they could really guarantee to him that they could run his business for the duration and return it to him just as it is with no profits.

'Beat Shicklegruber, Inc.'

"Right now the thing that I am interested in is putting a competitor by the name of Shicklegruber, Inc. out of business, and if they let me alone, I will be here at the same old stand long after that firm has been destroyed," this jobber added.

In Passaic, N. J., another oil marketer expressed the opinion that this was just about the "last straw."

"Why should I be told by an 'expert' to cut costs?" he asked.

"What jobber with brains is not doing everything possible to reduce costs, and who would be in better position to do it than myself, knowing more about the inner operations of my own business than an outsider could learn by the end of the war, regardless of how long it might last?"

An official of one of Rhode Island's largest independent oil companies voiced indignation at OPA's apparent "social reform" of a business that is at least "holding its own" in the face of practically every obstacle.

From Syracuse to Pawtucket; from northern New York to southern New Jersey, oil men are "hot under the collar" about the whole business.

Letters from NPN's Readers

'Socially Desirable'?

Philadelphia, Pa.
May 29, 1942

Editor, NPN:

Thanks for your many courageous and pointed editorials and especially for the "OPA Control" article in the May 27 issue of National Petroleum News.

This particular oil jobber (who, frankly, after slashing his costs nearly to the "bone", wonders where the line of "community desirability" begins) is deeply concerned at the possibility of keeping his business alive for the duration. He has no "profit as usual" motive, realizes that this war can be won only at the cost of substantial sacrifices on the part of every American and believes that he is doing whatever he can according to his lights. He is devoting more time to his business than for several years and his evenings are almost wholly occupied with the duties incident to the jobs of Commander of an American Legion Post, Senior Air Raid Warden, and Chairman of the Salvage for Victory Committee of his local Defense Council. His family have willingly agreed to a lowered standard of living for the duration as part of their contribution to the ultimate victory and all are putting what money can be spared into War Savings Bonds.

Although he has been fairly successful the past few years, he feels no inordinate attachment to money and profits. Having received no training in economic theories outside of the University of Experience, he confesses an inability to understand why an increase in prices only sufficient to absorb actual increased costs resulting from transportation and other tangible direct causes should be regarded as inflationary.

Contemplation of the obstacles on the road ahead of his business has brought him many times to the brink of succumbing to the temptation to "chuck it all" and go to war—if the Army will still have him.

But all these troubles "like an insubstantial pageant fads" before the vast, darkest implication of those words, "socially desirable", reportedly used by Mr. Collacott at Boston. Has the cat been let out of the bag? Can it be possible that the whirlwind of a wild sowing over a quarter century or more is now to be reaped in social reform hidden among the necessary restrictions and limitations of wartime?

"Hypothetical czar," "save society by streamlining his costs," "estimate of the value of his enterprise to the community," "the value of an industry and the value of one member," "to serve society within a stated cost," these phrases are danger signs to every American who believes that government exists primarily to safeguard the individual personal rights of men, which is the fundamental American way that, please God, we are fighting to preserve, rather than submerge the "person" of man in an abstract, conceptual thing called "society" or "the community",—which is the first step to totalitarianism. If you can lop off a man's business because someone judges it is not "socially desirable," where can you stop short of cutting off a man's head, for the reason that someone decides he is not useful to society?

But if we have been so occupied with the realities of our businesses in years past that we have failed to sense the dangerous indoctrination that has been going on in the

(*Continued on page* 13)

James C. Denton Dies in Oklahoma

James C. Denton, 60, vice-president and general counsel for Mid-Continent Petroleum Corp., died at his home in Tulsa June 4 after a long illness.

Mr. Denton, widely known for his part in the Madison oil trials in 1937, joined Cosden & Co., which later became Mid-Continent, in 1916, became general counsel in 1921 and also vice-president in 1925.

He served as president of Kansas-Oklahoma division of Mid-Continent Oil & Gas Assn. in 1926; as mayor of Nowata, Okla., for 12 years; as an officer in World War I; and as vice-president of Oklahoma division, American Bar Assn.

He leaves a widow, Mrs. Clara Murchison Denton, a son, Capt. J. C. Denton, Jr., two brothers and a sister.

James C. Denton

U. S. Used 11% More Gasoline In 1941—A.P.I.

NPN News Bureau

NEW YORK — Gasoline consumption for the entire country during 1941 was 26,874,821,000 gal., or 11% more than the 24,125,627,000 gal. consumed during 1940, according to figures compiled by American Petroleum Institute. Of the total, 36% —or 9,601,387,000 gal. — were consumed by motorists and other users in District 1, the East Coast curtailment area.

Consumption was up in every state during last year, with one-third of the states showing increases of more than 15% over the year previous. New York was the only state under 5%, with an increase of 4.4%. California and New York, as in other years, topped the list with consumption of 2,241,085,000 and 2,058,071,000 gal., respectively. These states, combined with 6 others—Illinois, Michigan, New Jersey, Ohio, Pennsylvania, and Texas—accounted for half the nation's total consumption.

A.P.I. figures were issued with the caution that they were compiled from data supplied by departments of the various state governments and in general are based upon returns made in accordance with gasoline tax or inspection laws. "However," the report concluded, "the figures reflect, as far as possible, total consumption, including both taxable and tax-exempt gallonage."

Canada's 3 Month 'Gas' Use Climbs

Special to NPN

OTTAWA—Total gasoline consumed in Canada during the first quarter of 1942 amounted to 5,369,152 bbls. as compared with 4,344,511 bbls. in same period of 1941, including aviation gasoline and solvents, according to figures compiled by Office of Oil Controller. All Canadian provinces showed increases during each of the three months.

The OOC reports consumption of light fuel oil increased from 2,206,268 bbls. in first quarter of 1941 to 2,386,810 bbls. in same period of 1942. Heavy fuels increased from 3,302,692 bbls. in first 3 months of 1941 to 3,356,956 bbls. in 1942.

Canadian crude oil production increased from 2,389,671 bbls. in first quarter of 1941 to 2,649,055 bbls. in same 1942 period, Dominion Bureau of Statistics reports.

NPN Reports from WASHINGTON

News for ALL branches of the Oil Industry

WASHINGTON BUREAU, 1034-36-38 National Press Bldg. ● Telephone National 3477 ● STAFF: A. M. Petty, Warren W. Burns, O. H. Knight, James M. Collins

FDR Calls Temporary Halt On National 'Gas' Rationing

WASHINGTON — A match tossed into a giant pocket of gasoline fumes would cause a mild explosion compared with the furor in the nation's capital over rationing motor fuel on a nationwide basis.

The explosions echoed even in the White House, resulting in assurances from President Roosevelt to 135 protesting congressmen that no action would be taken on nationwide gasoline rationing until more information is gathered.

In short, nationwide gasoline rationing is "under consideration" by an all-high source—the President of the United States. He will make the decision, personally.

However, no decision will be taken until July 1 on the government's program of doling out so much gasoline to all motorists, regardless of areas—even in the shadow of the Southwest's oil wells—Mr. Roosevelt reportedly indicated.

But from other high and sometimes mighty source, Price Administrator Henderson—whose Office of Price Administration is up to its neck in gasoline rationing programs, plans and possible purges—it's learned from a letter he wrote to Sen. Maloney, Connecticut, that Mr. Henderson thinks nationwide gasoline rationing necessary to save transportation. And what Mr. Henderson often thinks is often the way the White House acts.

However, the Chief Executive was told by one congressman this week that "Mr. Henderson is a good man in his line but he's trying to do too much".

Nelson Says 'Nothing'

On the War Production Board front, Boss Nelson is acting in a manner hard to criticize. His joint letter to Senators Thomas, Oklahoma, and Connally, Texas, both of whom asked for an open conference for oil state representatives before any nationwide gasoline rationing plan became effective, said, in effect, "nothing", as one source described it.

That is, the letter said "nothing" as to whether Mr. Nelson favored such a conference, but the WPB chief did indicate that something more definite might be said after his office releases a report on the country's "serious rubber shortage".

But whatever the reason eventually given for nationwide gasoline rationing—if such a decision is made—many Washington sources think Mr. Roosevelt is the only man in the country who could come anywhere near "selling the public" on the idea—regardless of whether on a transportation or rubber-saving basis.

And maybe the President is of the same mind, as he's reported to have told a congressional delegation that he would probably address the nation on the reason, if such a step is deemed necessary.

Ickes States Views

However, the President's and the country's Petroleum Co-ordinator for War, Mr. Ickes, went on record this week as opposing gasoline rationing in areas where gasoline is plentiful. In a letter to Sen. Aiken, Vermont, Mr. Ickes said:

"We (the Office of Petroleum Co-ordinator) feel it is unreasonable and impracticable to impose curtailment in areas where there exists a sufficiency or a surplus of supply. We believe that areas where there are plenty of petroleum products, which areas accordingly are free from curtailment, should contribute to the relief of the areas where a shortage exists.

"Thus, we draw upon the areas of surplus for their transportation facilities and their stocks and as this operates to extend the areas of shortage, it will be necessary to extend the area of curtailment."

In a letter to Sen. Lee, Oklahoma, Mr. Ickes favors a conference of oil state governors, as Sen. Lee had suggested, and says that "when and if" nationwide gasoline rationing is evoked, "the facts could and would be set forth clearly and in full detail to the end that a conference of governors of oil producing states might prove to be very beneficial."

Congressmen Still Protest

Again from the Capitol, the center of this country's attitude on the ever-bubbling nationwide gasoline rationing question, come bills and resolution as well as much verbal protest.

This past week, Rep. Johnson, Oklahoma, introduced a concurrent resolution (H. Con. Res. 69) to the effect that country-wide gasoline rationing should not go into effect until the House of Representatives had been furnished with "the full facts, figures and such other information as may be necessary in order to show that such rationing is necessary to conserve the supply of gasoline".

In the Senate, Sen. Johnson, Colorado, introduced a bill (S. 2575) which would amend the Emergency Price Control Act in such a way that Mr. Henderson would be forced to hold state hearings before gasoline rationing went into effect in any state in which such rationing was not in effect on June 1 of this year.

Moreover, this bill provides that public in states not now rationed would be able to testify as to the necessity of gasoline rationing and the need for saving motor vehicle tires.

This bill also provides that Mr. Henderson would make an overall study of the extent to which scrap rubber is being reclaimed and made available for use and to hold public hearings, seeking to find ways of increasing the use of scrap rubber.

P.I.W.C. Has Tire Plan

On scrap rubber, the Petroleum Industry War Council has a plan for keeping all mechanically-usable cars on the road with a small quantity of new rubber, plus large quantities of reclaimed rubber. (See page 22 of this issue.)

This plan was presented to WPB which admitted that it was workable, provided sufficient scrap rubber was available. But the WPB wasn't exactly enthusiastic about the P.I.W.C. releasing the plan because it might unduly raise hopes for motorists needing rubber replacements. The Council didn't release it.

Meanwhile, various government agencies have been scurrying around to get a scrap rubber program under way. To date, OPA's scrap prices have been too low to attract much activity in bringing very large amounts to market.

However, WPB reportedly is willing to see scrap rubber prices soar—but if OPA is willing, nothing has been said about it to date.

Another Capitol action was a resolution (H. Res. 494) submitted by Rep. Dingell, Michigan, to provide for a 5-man committee to conduct an investigation of "the entire problem with respect to shortages and rationing of gasoline, fuel oil and other petroleum products . . . with particular reference to the methods which are being employed in the distribution and deliveries of such products".

Would Probe Synthetic

This select committee would also probe the natural and synthetic rubber sources and see "causes or reasons for the failure to produce an adequate

U. S. to Pay $24 a Ton For Scrap Rubber

WASHINGTON — Rubber Reserve Co. intends to buy scrap rubber "anywhere in U. S." in carload lots at $25 per ton to stimulate scrap collection. The price applies to run of mine scrap and worn out tires which are selling currently at about $18 per ton.

Announcing the program June 4, Federal Loan Administrator Jesse Jones said the scrap would be made available to reclaimers as needed.

supply" for military and civilian use.

At least one member of Congress is "out of tune" with his colleagues on nationwide gasoline rationing. This is Sen. Russell, Georgia, who held it is "unfair" to ask just a portion of the states to bear the burden.

"Regional rationing is undemocratic", Sen. Russell says. "The burden ought to be spread equitably among all states."

Rep. Beiter, New York, says nationwide gasoline rationing "will add another burden to the country's already overtaxed transportation facilities and will result in complete ruination of the gasoline and oil and related industries, as well as a serious decline in state and federal revenue."

* * *

OPA Plans 7 Types of Books For Rationing 'Gas' in East

WASHINGTON — Seven types of ration coupon books are included in Office of Price Administration's "permanent" gasoline rationing plan for the East Coast, due to become effective next month. But none of the coupon books are lettered "X" (meaning unlimited rations) as in the present "meal ticket" rationing plan.

Briefly, the types of ration books are:

"A" for passenger cars; 48 coupons, 6 pages of 8 coupons each. Each page must be used up in a 2-month period or become void. Each coupon is valued at 4 gal., to provide 2880 miles of travel a year at 15 miles per gallon, according to OPA's tentative plans now.

"D" for motorcycles, motorbikes and similar vehicles; 48 coupons, valued at less than the "A" coupons.

"B" and "C" for supplementary rations for holders of "A" and "D" cards who prove a need for more than the basic ration.

"S-1" and "S-2" for commercial and governmental vehicles with each card "tailored" to provide for the actual, proved requirements of these vehicles but no more.

"E" and "R" for non-highway users, including boats.

Extra Rations Limited

OPA pointedly announces that there will be no "X" cards in this new plan for the East. Each vehicle, even a truck or governmental car, will be allocated its requirements, but no more, says OPA.

"No motorist under the new plan," said OPA, "will receive gasoline in excess of what he needs to carry on his work, except that all motorists will have a basic ration to provide for household and other necessary family driving."

To obtain rations in addition to his "A" book of 4 gal. weekly (roughly), the motorist must fill out a detailed application and present it to his local rationing board.

Only basis of obtaining supplementary rations is that the car is needed in applicant's work or going to and from work. Applicant must show why he doesn't use public transportation, must prove that he is party to a "ride-sharing" agreement with at least three other members and that he "regularly" (4 out of 5 working days) drives at least three besides himself to and from work.

If the applicant for a "B" book satisfies these requirements, then he will get a book of 16 coupons which must last him three months, according to mileage need he has proved. This is in addition to his basic ration—the "A" book—of 48 coupons. If the "B" book will meet the user's needs for a period longer than 3 months, then the ration board will "tailor" the book by fixing an expiration date which will allow the exact mileage required, stamping the date on cover.

'C' Books Restricted

"C" books will contain a maximum of 96 coupons. They will be issued to drivers who prove that neither an "A" book, nor an "A" book plus a "B" book, will be sufficient to "carry on work related to the war effort or to the maintenance of essential public or essential public or civilian services.

"Such drivers ("C" book holders)," says OPA, "will receive gasoline only for driving in connection with specified work or services of this type. Among the services for which such rations will be issued are medical care, maintenance of public utilities, carrying farm labor, giving religious comfort or assistance, and making official trips on government business."

"S" Books Subject to ODT

Each "S" book will contain enough coupons for 3 months. They will be issued to trucks, buses and certain passenger car types operated for commercial or governmental purposes. Applications for vehicles operated under an Interstate Commerce Commission license must be filed at a local office of Office of Defense Transportation. Other applicants are to apply to ration boards. Each application must state specifically the vehicle's mileage requirements, and these are to be subject to ODT regulations cutting down truck mileage.

* * *

OPA to Follow Up Coupons In Eastern Rationing Plan

WASHINGTON—Strict audit control of each gasoline ration coupon, plus a tie-in with state gasoline tax collection records, is the way Office of Price Administration hopes to prevent any "leaks" in its permanent rationing program for the East Coast, due to go into effect next month.

Each service station operator will start off with full tanks of gasoline or the equivalent in inventory coupons (for empty space in his tanks) issued by his local rationing board.

He will be required to collect a coupon from consumers for every gallon sold. And when he replenishes his storage, he will have to present his supplier with a coupon for every gallon received. And suppliers in turn must pass the coupons up the line or to local ration boards.

So, any station which sells gasoline without obtaining coupons is reducing his future supplies by just that amount. In addition, the OPA points out, he will be subject to $10,000 fine or one year imprisonment, or both, for violating rationing regulations.

Explains System

OPA explains the ration coupon "flow back" system, as follows:

The day before rationing becomes effective the station operator will take an inventory of all his gasoline storage capacity. This will probably be at closing time since at that time his tanks will contain the least amount of gasoline.

The following day he will go down to his local rationing board and file an affidavit telling exactly how much gas he had in his storage tanks. The local board will then issue the station operator inventory coupons exactly equal to the difference between the amount of gasoline in his tanks at the time of inventory and the full capacity of the tanks.

Take the case of a small station which may have one 500-gallon tank. At the time of inventory, the operator finds he has only 200 gallons in the tank. When he registers with his local board, he will be entitled to obtain inventory coupons which have an exchange value worth 300 gallons of gasoline.

From then on, the amount of coupons in the hands of any individual station operator will depend upon his sales. Whenever, for example, he sells five gallons to a customer, the customer must turn in coupons with an exchange value of five gallons.

If the operator follows the regulations and obtains a coupon for every gallon of gasoline he dispenses, he will always have coupons whose exchange value added to the amount of gasoline actually in his storage tanks will be equal to the full capacity of the tanks.

Each dealer will also be required to maintain a record at his place of business showing the quantity of gasoline received at the time of each purchase, the name of the supplier from whom he made the purchase and the date of the purchase.

At the time of delivery, the station operator will turn over to his supplier an amount of consumer coupons, inventory coupons and "acknowledgements of receipt of gasoline" exactly equal to the total gallonage delivered to his station.

The "acknowledgements of receipt of gasoline" are special requisition forms which are being prepared for the use of members of the armed forces only. They will enable a station operator to get back from his supplier the amount of gasoline he may have sold to a member of the armed forces driving an official service vehicle.

The gasoline truck driver will be required to turn into his head office a quantity of coupons or requisitions equal in gallon value to the quantity of gasoline he delivered to the service stations on his route.

A service station operator will be provided with a simple form on which he will be able to list the number and gallon value of each type of coupon or requisition he turns over to his supplier at the time of delivery.

The truck driver will enter the amount of gasoline on the form and initial it. One of these forms will be attached to the coupons and requisitions turned over to the truck driver and the other will be kept by the station operator to provide a purchase record for reference.

The suppliers may at any time convert their accumulated coupons and requisitions into a single certificate at the local rationing board.

A primary supplier, meaning a supplier who is permitted to account directly to the state for gasoline taxes applicable to his sales

or receipts of gasoline, will be required to prepare an additional copy of his monthly gasoline tax return to the state.

This additional copy of the state tax return must be accompanied by certificates covering total sales during the month for which the return is rendered, and forwarded to the State Gasoline Tax Administrator.

The State Administrator will in turn indicate that the extra tax return statement is a true copy of the original, audit the attached certificate, destroy same, and forward the additional copy of the state tax return to the Fuel Rationing Branch Office of Price Administration, Washington, D. C.

The OPA expects this procedure to provide the basis for an audit of gasoline at several levels, starting with the check at service station outlets to determine if the gasoline inventory on hand plus the total gallonage value of coupons and requisitions on hand equals the station's total storage facilities.

The State Gasoline Tax Administrator's Office will provide the basis for an audit of certificates and tax returns, subject to review by the OPA Fuel Rationing Branch in Washington.

Action Sought On Patman Bill To Void Lease

WASHINGTON—Rep. Wright Patman, Tex., plans to press for early action on his bill which would enable a service station in a gasoline-rationed area to be relieved of lease obligations.

The bill (H. R. 6760) provides that any person, whose principal business is selling or servicing any commodity which is rationed by the government in premises leased or rented by him, may institute a proceeding in a federal district or state court to obtain relief from his liabilities under the lease.

And if the court finds the ability of such person to comply with terms of the lease is substantially impaired because of rationing, the court may order cancellation or modification of the lease or deferment of payments.

In the case of a person, dealing in a rationed commodity, who is liable for payment of any obligation secured by mortgage, trust deed or other security in the nature of a mortgage, relief may be sought from any federal district or state court.

Rep. Patman, who introduced the bill on March 10, said it was designed for the relief of service stations and automobile dealers. Press of other duties, he added, has prevented him from prodding House judiciary committee—which has promised a hearing on it—to take action. However, he plans action soon.

Roosevelt Gets Bill to Suspend Anti-Trust Laws

WASHINGTON — Barring a presidential veto (not expected), War Production Board Chairman Nelson is to have final say—and responsibility—for suspending anti-trust laws for co-operative action deemed requisite to prosecution of the war.

Presumably, this will require Petroleum Co-ordinator Ickes to "clear" through the WPB all recommendations, directives and other plans for co-operative action by oil companies for the war effort. At present, plan has been for OPC to obtain a "green light" letter from Assistant Attorney General Arnold for such recommendations.

No Veto Power Given D. J.

Senate and House have completed action on Murray small business bill (S. 2250) containing a provision authorizing the WPB chairman, after "consultation" with the attorney general, to certify such action as war essential to the attorney general. Bill needs only the president's signature to become law.

Attorney General is required to report at least every 120 days on such certifications received and must publish them, including any plans or arrangements under such certificates which he deems advisable to publish.

Murray May Start Hearings June 15

WASHINGTON—Senate small business committee may initiate hearings in the week of June 15 covering gasoline, rubber and transportation.

Chairman Murray, Montana, said the committee would meet this week to decide on the hearing.

Witnesses will be called to develop information on the impact of rationing of gasoline and tires, and transportation difficulties, on small businesses. Information will be sought he said, on aids that might be necessary for small businessmen.

Previously, it was disclosed that the committee was planning a hearing into the plight of small refiners and oil distributors. This disclosure came in a recent letter from Sen. Murray to J. A. Novelli, general manager of the Elm Oil Co., Long Beach, Calif.

To Aid Independent Refiners

Mr. Novelli, telling the Senator about problems confronting small refiners, complained that his company is forced to work a 44-hour week when its volume and revenue warrant only a 36-hour week; 40% of its trained personnel had been lost in 45 days to industries paying bonus wages; commercial market will not absorb his products at price high enough to compete for defense labor; majors operate at a high level of profit and his company operates at loss, making it hard for them to understand why "majors steadfastly refuse to purchase our aviation gasoline products and Navy specification fuels at price which will allow us to 'break even.' "

'War Damage Corp.' Set Up to Insure Against War Loss

WASHINGTON — When and if the enemy attacks and damages industrial buildings, manufacturing plants, rolling stock, storage cargo, wharves, private dwellings and certain other properties, RFC's newly-created War Damage Corp. will be ready to reimburse losses—assuming, of course, that owners have taken out policies.

Arrangements have been made with the fire insurance industry to act as fiduciary agents for the WDC in writing "policies of protection against enemy attack", Secretary of Commerce Jones explains, adding:

"It will be necessary for everyone who wants protection against enemy attacks to make his application as soon as the necessary blanks are available, because the blanket protection now in force will expire, by law, June 30th."

Insurance Coverage

About June 20, Mr. Jones expects a manual of rates, rules and regulations, as well as application blanks to be available throughout the U. S.

For a 12-month period, policies will be issued "to cover physical loss of real and personal property which may result from enemy attack or action of our own forces in resisting enemy attack".

Types of losses which the WDC policies will not cover, says Mr. Jones, follow:

Blackout, capture, sabotage, seizure, pillage, looting, use and occupancy, rent, rental value or other indirect loss or consequential damage.

Recognizing that war losses are a national problem, Congress specified that rates for this protection should be geographically uniform. In other words, rates are to be the same over the entire U. S., regardless of where property is located.

Persons wishing this protection should contact their local fire insurance agent or broker, Mr. Jones says.

Principal officers of WDC are: Mr. Jones, chairman; W. L. Clayton, president; Frank T. Christensen, executive vice-president; Howard J. Klossner, vice-president; Stanley T. Crossland, vice-president and A. T. Hobson, secretary.

Rates in Effect

Following WDC rates have been released by Mr. Jones:

Growing crops	5c on $100
Farm buildings, dwellings, rural and urban, including contents	10c on $100

No coinsurance will be required on farm buildings and dwellings, but on all other property, a 50% coinsurance clause will be required, with fixed credits from the established rates for coinsurance above 50%.

	On Fire Resistive Construction	On Ordinary Construction	On Non-Classified
Churches, hospitals, public buildings	10c	15c	...
Apartments, office buildings, warehouses	15c	20c	...
Manufacturing plants, wharves, bridges	20c	30c	...
Railroads and public utilities	...	...	30c
Rolling stock	...	...	25c
Roadbeds and trackage	...	...	10c
Floaters for movable property (with 100% coinsurance mandatory)	...	...	25c
Property in transit	...	...	3c
Vessels under construction	25c	37½c	...
Vessels devoted to storage or industrial use	50c	75c	...
Ferries, commercial hulls, storage cargo, pleasure craft	50c	75c	...
Pleasure watercraft and pleasure aircraft (when not in use)	...	...	25c

Arnold Gives 'Green Light' To P.I.W.C. Cost Committee

WASHINGTON — With a "green light" from Assistant Attorney General Arnold, the Petroleum Industry War Council's Committee on Cost and Price Adjustment, headed by Dr. John D. Gill (*NPN May 27, p. 7*), is now authorized to investigate and report to committees of Office of Petroleum Co-ordinator and Office of Price Administration on the effect of oil industry prices as set by OPA.

This "green light" was in form of an approval to an amendment to OPC's Recommendation No. 24. The amendment was signed June 1 by Deputy Petroleum Co-ordinator Davies.

Committee Purposes

This P.I.W.C. standing committee is directed to prepare facts, figures and other data, at request of OPC or OPA, for use in any cost or price adjustment proceedings before OPA.

The general chairman of any of OPC's 5 districts is empowered, upon request of the cost committee chairman, to name a temporary cost adjustment committee to serve until specific economic cases, for which it was formed, have been completed.

This Cost and Price Adjustment committee "shall obtain, analyze, and keep current all pertinent and available facts, figures, and other data with respect to the effect of war conditions on the economic and financial status of the petroleum industry", the amendment provides.

Functions Given

Furthermore, the committee is to:

"Investigate and report to the Petroleum Coordinator for War and the Petroleum Industry War Council concerning the effect upon petroleum supply of rules, regulations, orders, and other actions of the Office of Price Administration relating to costs and prices which affect the petroleum industry.

"Upon the request of the Office of Petroleum Coordinator for War or of the Office of Price Administration, prepare facts, figures, or other data, or economic analyses thereof for use in connection with any price or cost proceeding before the Office of Price Administration.

"Serve as a liaison committee between the Council and the Committees established by the Office of Petroleum Coordinator for War and the Office of Price Administration on matters relating to petroleum industry cost and price adjustments.

"In carrying out the duties, responsibilities, and functions under this section, the Committee on Cost and Price Adjustment is authorized, in the name of the Petroleum Industry War Council:

"To direct such inquiries and questionnaires to such companies, organizations, or persons as may be necessary or appropriate to the conduct of its activities.

"To ask and receive expert assistance from any company, organization, or person.

"To consult with any of the committees or temporary or permanent subcommittees of the Petroleum Coordinator for War or of the Petroleum Industry War Council, and with any appropriate representative of the Office of Petroleum Coordinator for War or of the Office of Price Administration.

"The chairman of any General Committee for any District of the Office of Petroleum Coordinator for War may, upon request by the chairman of the Committee on Cost and Price Adjustment, designate a temporary cost adjustment committee to assist with respect to any specific economic case or problem which may arise within such District, to serve only until the particular case or problem has been disposed of by the Office of Price Administration, or otherwise. The Committee on Cost and Price Adjustment shall maintain such staff and appoint such persons as it finds necessary to carry out its duties, responsibilities, and functions under this section. Operating expenses of the Committee shall be paid from available Petroleum Industry War Council funds."

Trial Florida-Virginia Run Of Oil Barges Made

WASHINGTON—A "trial run" of two barges—one of 10,000-bbl. capacity and the other of 11,000-bbl. capacity—has successfully been completed on the inland waterway from Jacksonville, Fla., to Norfolk, Va., the Petroleum Industry War Council was told this past week.

This trip took 13 days, one way, P. I. W. C. was told.

Oil Industry Studies Connally Bill Proposing War Petroleum Corporation

WASHINGTON — Connally Bill setting up a "War Petroleum Corporation" (S. 2562) which would provide statutory authority for execution of many war plans for the oil industry is exciting wide discussion in Washington.

No action has been taken yet on the bill, but some members of Petroleum Industry War Council members discussed it approvingly while others took it home for their lawyers to study.

In addition to the loan feature of the bill, the corporation—with a $500,000,000 capitalization—would be empowered to control refinery operations, carry out extensive transportation relocations and conversions.

Subsidy Plan Included

Authority for the oft-mentioned oil subsidy plan also is in the bill.

Apparently, the corporation could even buy up oil reserves since the bill contains a provision for the storage of petroleum and petroleum products "both above and underground". Another provision specifies that the corporation shall maintain "adequate reserves" and production of petroleum and products which are strategically important in quality or location.

Subsections (b) and (c) of Section 5 permit the corporation to buy petroleum and petroleum products at such prices as the co-ordinator, who would be the incorporator, may deem necessary and to sell that oil at prices no higher than those set by OPA, and to pay transportation charges on oil.

Limits on Authority

But subsection (d) of the same section places a limitation on this authority, saying that the co-ordinator shall transport and store petroleum provided that the corporation shall not pay a higher price than that prescribed by OPA unless the cost of production increased as a result of some action by the co-ordinator, and then the excess price shall not exceed the excess cost.

And provided further that no transportation charge for moving oil belonging to someone else shall be paid by the co-ordinator in an amount exceeding the difference between normal pre-war rates prevailing on March 1, 1942, and any increased rates paid or to be paid in response to any direction of the co-ordinator.

Ban Credit Sales Until End of War, Oil Council Urges

WASHINGTON — "We trust in God; Others Pay Cash" is a sign many a service station operator has laughed at for years, for many an operator has done the largest part of his business on a credit basis. But he may be forced to discontinue this practice after Dec. 31 of this year.

Reason: At the meeting of the Petroleum Industry War Council here June 2-4, a resolution was adopted to abolish all credit sales at retail petroleum outlets of any petroleum product or accessory "for the duration".

However, this resolution to abolish credit sales was not unanimous. The question was submitted to the 5 district marketing committees, with Districts 1, 2 and 5 voting in favor, District 3 against. A tie was the result in District 4.

'Conforms to FDR Wish'

Nevertheless, P. I. W. C.'s standing marketing committee says its resolution is "in conformance with the expressed wish of the President of the United States to curtail retail credits and curtail expenses and the use of manpower."

The P.I.W.C. committee, however, is "cognizant of the arguments in favor of continued retail credit sales to certain types of commercial accounts and recognizes that if such credit sales are no longer carried by suppliers that the service station will, in certain cases, carry the accounts direct".

Text of Resolution

Pertinent part of committee's resolution follows:

"Now, therefore, be it resolved that the Petroleum Industry War Council recommends the Petroleum Co-ordinator for War take such steps as are necessary or appropriate to eliminate all retail credit

sales of petroleum products or automobile accessories through petroleum retail outlets, except such retail credit sales to the armed forces of the United States, to the Federal or any state or municipal government or any department of any of them, whether such sales are represented by consumer credit cards, or other medium of credit, not later than December 31, 1942, and continuing in effect for the duration, and that, effective with the action taken by the Petroleum Co-ordinator, no new credit cards shall be issued or new retail credit accounts shall be opened".

P.I.W.C.'s vote on this resolution was 20 for and 10 against —the remaining members of the Council present did not vote.

Estimates on the carrying cost of credit sales, in normal times with gasoline gallonage in no way curtailed, run from $16,000,000 to $30,000,000 yearly.

Named to Probe Rubber

WASHINGTON — Elliott E. Simpson, New York, independent rubber dealer, has been named counsel by Rep. Somers, New York, to a special subcommittee of House coinage, weights and measures committee, investigating entire rubber situation.

P.I.W.C. Picks up Pointers On Quizzing Oil Chief Ickes

WASHINGTON — A few pointers on "how to quiz the Co-ordinator" were given here last week by Washington newspapermen to members of the Petroleum Industry War Council.

The occasion was Petroleum Co-ordinator Ickes' press conference. The oil men became the audience mostly because their usual 2-day meeting lasted 3 days and because they were conferring in Mr. Ickes' conference room where the press assembles at 11:15 on most Thursdays.

As usual these days, majority of the questions asked Mr. Ickes were on oil and, as expected, the oil industry audience was interested.

Ickes 'In Form'

The humorous and serious side of many questions were aired, and the co-ordinator "was in form", as one reporter expressed it, for before the conference ended, he'd been prodded into an "Oh Hell, there is a war on".

This exclamation came when a reporter, interested in whether Gov. Tugwell caused the transfer of a naval aide, persisted in getting an answer.

"Oh Hell, there is a war on," Mr. Ickes said. "I think those are trifling, trivial questions. A small personal matter involving a naval aide appointed to serve Gov. Tugwell about whom he and he alone ought to have some concern . . . I think a man has the same right to pass upon his naval aide as he has to select his own wife."

Q and A on Rubber

If any single question-answer "contest" between the newsmen and Mr. Ickes interested the oil men looking on, it might have been the following:

Reporter: "Mr. Secretary, a while ago (at the first of the press conference), you said you had no responsibility for the rubber situation, but if there were rubber for cars, you'd have an outlet for gasoline which is a by-product of refineries working on war orders, and if there are no motor cars to burn the gasoline, have you any other means of disposing of that gasoline?"

Mr. Ickes: "I have no authority over rubber, unless you want to give me an executive order."

Reporter: "How about the Connally Bill? Would that be enough?"

Mr. Ickes: "I doubt it. I'm not familiar enough with all of the provisions in that bill to be positive in any comment that I might make, but I wouldn't have thought it would cover this."

Reporter: "It provides that you would buy up, return it to the ground, or otherwise dispose of it."

Mr. Ickes: "What would that have to do with rubber?"

Reporter: "That is an alternative means."

Mr. Ickes: "Well, the Connally Bill is merely a bill. It isn't an act yet."

Likes Connally Bill

Asked about the War Petroleum Corporation, as set up in Sen. Connally's Bill, Mr. Ickes said:

"Well, I think there is a good deal of merit in that proposal. We haven't been asked to report on it officially yet, but I suppose we will be."

The co-ordinator told his conference that he might discuss matter of a tanker convoy with the Navy. Asked if he planned to do it at any time in the near future, Mr. Ickes replied:

"Oh, I often work without plan. I have no plan and yet I might be doing it tomorrow if the situation developed that made it advisable."

P.I.W.C. Attends Co-ordinator Ickes' Press Conference

Petroleum Industry War Council stands in the background while Washington newspapermen submit Petroleum Co-ordinator Ickes to the "know how" questioning of a press conference. Oil men saw Mr. Ickes as sometimes the "willing witness", other times not. It was a rare opportunity for the P.I.W.C. because a cabinet officer's press conferences are usually limited to newspapermen. Some of the oil men were amazed at the give-and-take between Mr. Ickes and his reportorial cross-examiners

Station Price Posting Rules Set in Amendment to No. 137

WASHINGTON—Service stations are required by Amendment No. 2 to Maximum Price Regulation No. 137 to post conspicuously their maximum prices, listed as to premium, regular and third grades.

The amendment, said by Office of Price Administration to be designed to bring service station price-posting requirements into line with similar provisions of General Maximum Price Regulation, extended from June 1 to July 1 the effective date for filing maximum prices with War Time Price and Rationing Boards.

Text of amendment follows:

TITLE 32—NATIONAL DEFENSE
CHAPTER XI—OFFICE OF PRICE ADMINISTRATION
PART 1340—FUEL
AMENDMENT NO. 2 TO MAXIMUM PRICE REGULATION NO. 137[1]—MOTOR FUEL SOLD AT SERVICE STATIONS

A statement of the considerations involved in the issuance of this amendment has been issued simultaneously herewith and has been filed with the Division of the Federal Register.

Section 1340.86 is amended as set forth below:

1340.86 **Statement and postings of maximum prices of motor fuel sold at service stations.**

(a) Every person subject to this Maximum Price Regulation No. 137 shall post the maximum price for each grade of motor fuel in a manner plainly visible to, and understandable by, each purchaser. Such posting shall be marked "Maximum Prices", beneath which shall be marked each grade of motor fuel (premium, regular, third) offered for sale and opposite each grade shall be stated the maximum price for that grade of motor fuel.

(b) On or before July 1, 1942 every person subject to this Maximum Price Regulation No. 137 shall file with the appropriate War Price and Rationing Board of the Office of Price Administration a statement showing his maximum price for each grade of motor fuel together with an appropriate description of its specifications. Such statement shall be kept up to date by such person by filing on the first day of every succeeding month a statement of his maximum price for each grade of motor fuel newly offered for sale by him at a service station during the previous month together with an appropriate description of its specifications.

1340.93a **Effective date of amendments.**

(b) Amendment No. 2 (§ 1340.86) to Maximum Price Regulation No. 137 shall become effective June 4th, 1942.

Issued this 4th day of June, 1942.
(Signed) Leon Henderson
Leon Henderson
Administrator

[1] 7 F.R. 3165, 3749

Earlier, in Amendment No. 1 to Regulation 137, OPA permitted relief to dealers under the retail price freeze to the extent of allowing a minimum 3c margin. Text of Amendment No. 1 follows:

TITLE 32—NATIONAL DEFENSE
CHAPTER XI—OFFICE OF PRICE ADMINISTRATION
PART 1340—FUEL
AMENDMENT NO. 1 TO MAXIMUM PRICE REGULATION NO. 137[1]—MOTOR FUEL SOLD AT SERVICE STATIONS

A statement of the considerations involved in the issuance of this amendment has been issued simultaneously herewith and has been filed with the Division of the Federal Register.

Section 1340.90 (a) (5) is amended; a new paragraph (c) is added to Section 1340.91; a new subparagraph (11) is added to Section 1340.90 (a), and a new Section 1340.93a is added as set forth below:

1340.90 **Definitions.** (a) When used in this Maximum Price Regulation No. 137, the term:

(5) **Seller**

(i) Where a seller makes sales through more than one service station, each separate service station shall be deemed to be a separate seller, except that for the purposes of section 1499.16 of The General Maximum Price Regulation,[2] granting licenses to sellers subject to this Maximum Price Regulation No. 137, the owner of the business shall be considered the seller regardless of the number of separate places of business he owns.

(ii) "Seller of the same class" means a seller (a) performing the same function, (b) of similar type, (c) dealing in the same type of commodity, and (d) selling to the same class of purchaser.

[1] 7 F.R. 3165
[2] 7 F.R. 3153, 3330

(11) "Curtailment Area" means:

(i) The entire eastern part of the continental United States up to and including all of the counties of Wayne, Ontario and Steuben in the State of New York; Tioga, Lycoming, Clinton, Centre, Blair and Bedford in the State of Pennsylvania; Allegany in the State of Maryland; Mineral, Grant and Pendleton in the State of West Virginia; Highland, Bath, Alleghany, Craig, Giles, Pulaski, Wythe and Grayson in the State of Virginia; Ashe, Watsuga, Avery, Mitchell, Yancey, Madison, Haywood, Swain, Graham and Cherokee in the State of North Carolina; Fannin, Murray, Whitfield, Catoosa, Dade, Walker, Chattooga, Floyd, Polk, Haralson, Carroll, Heard, Troup, Harris, Muscogee, Chattahoochee, Stewart, Quitman, Clay, Early, Seminole and Decatur in the State of Georgia; and Gadsden, Liberty and that part of Franklin which lies east of the Apalachicola River in the State of Florida: Provided, that if any part of any incorporated or unincorporated city, town or village or if any part of any service station is located within the aforementioned area, all of such city, town, village or service station shall be considered as within the said area.

(ii) The States of Oregon and Washington.

1340.91 **Appendix A: Maximum prices for motor fuel sold at service stations.**

(c) Where the maximum price for any grade of motor fuel at a service station in the curtailment area results in a difference of less than 3 cents per gallon between the price charged to the operator of the service station for the motor fuel and the maximum price so calculated, the maximum price for such grade of motor fuel at such service station shall be 3 cents higher than the price charged to the service station operator; Provided, That persons calculating maximum prices under this paragraph shall submit to the Office of Price Administration, within five days after adjusting prices under this paragraph, a certified statement of the price charged them for each grade of motor fuel and the maximum prices otherwise applicable.

1340.93a **Effective dates of amendments.**

(a) Amendment No. 1 (§§ 1340.90 (a) (5) and (11), 1340.91 (c), 1340.93a) to Maximum Price Regulation No. 137 shall become effective May 19, 1942.

(Pub. Law 421, 77th Cong.)
Issued this 18th day of May, 1942.
(Signed) Leon Henderson
Administrator

Certified to be a true copy of the original
(Sgd) C. A. Bishop, Secretary

WPB Paves Way for PRP Plan; Assigns Codes for Industry

WASHINGTON — War Production Board has assigned a code number to each industry to be displayed on each purchase order, which will show the end use of each piece of material or equipment bought in the U. S., whether it be for Army, Navy, Lend-Lease, foreign or domestic purchasers.

Purpose is to prepare the way for allocation of all materials.

A number—called an Allocation Classification Symbol—is assigned to each class of business which is divided decimally into its various subdivisions. The numbers range from 1.00 to 23.00.

Oil industry's code number is 9.20. It must be shown on all purchase orders for materials and equipment.

Identifies Purchaser

The second important feature of this dual classification system is the purchaser's symbol indicating the general type of purchaser. The symbols are USA for Army, USN for Navy and Maritime Commission, LL for Lend-Lease, FP for other foreign purchasers, and DP for domestic purchasers. The purchaser's symbol must precede the code number.

Thus, the 2 symbols show the end use of the product and the general purpose for which it is bought.

Under terms of Priorities Regulation No. 10, announced June 2, the code number and purchaser's symbol are to be shown on each purchase order or contract placed after June 30, 1942, and on all purchase orders or contracts, previously or subsequently placed, calling for delivery after July 31, 1942.

Retailers and persons who distribute to retailers are exempt, generally, from the classification system.

Regarding the oil industry's code number of 9.20, specific instructions accompanying the Regulation said:

"All companies concerned with the production of petroleum, refining, pipeline construction and operation, storage and retail distribution of petroleum, oil and gasoline, should place this allocation symbol on all purchase orders they issue."

An official said the exception is a company building a new plant. If the plant is to be owned by the company, the symbol would be one of the 21.00 numbers assigned to non-government projects. If the plant is owned by the government, it would carry one of the 7.00 symbols for government-owned construction.

As an instance of the numbers assigned by industry, class 9.00 is "power, light and heat". This class is broken down into electricity, 9.10; petroleum, 9.20; coal and coke, 9.30; and gas 9.40.

WPB emphasized that the allocation and purchase symbols are not designed to indicate relative importance.

WPB ruled several months ago that all industries are to use the Production Requirements Plan, or something similar to it, by July 1.

Inquiries Invited

A new priority plan, using the underlying PRP principle of allocating materials over a given calendar period, is being developed for the oil industry, but still is in formative stage. Consensus is that it will be ready for adoption by July 1.

Edward Gould, chief of the allocation classification system, invites all industries to send him their inquiries about the new coding method. He is in Room 5724, New Social Security Building, Washington, D. C.

The EDITOR'S Page

Readers comments and opinions will be much appreciated by—WARREN C. PLATT, NPN's Editor and publisher, Penton Building, Cleveland, O.

Frozen Price Ceiling Forces Oil Marketers into National Price War? Was it "Planned That Way"?

IS OPA trying to bring about a nationwide price war among all oil companies as a means of holding down oil prices and thus protecting its present price ceiling?

Is OPA going to put on that price war as a "battle royal" so as to eliminate oil marketers whose businesses OPA considers are NOT "socially desirable" or "socially necessary"?

Is the threatened nationwide 50% gasoline rationing for the purpose of so reducing, or eliminating, all operating margin that the "knock outs" in the "battle royal" will come all the sooner?

Are the "marketing counsellors" now being hired by OPA to "advise" oil marketers on "stripping your business down", also to be the instigators and stimulators of this price war in order to achieve the social change in the oil industry "by a dog-eat-dog fight for survival" policy as recommended by OPA?

These and many more questions naturally come to mind as one reads the official OPA speech on its petroleum policy as delivered by one of its specialists from Washington at a meeting of the Independent Oil Men's Assn. of New England the other week.

One wonders if that is not just about the most brutal and high-and-mighty and unwarranted speech ever delivered by any government agency to a group of American business men?

One also wonders if ever before has a government agency so openly and brazenly flouted the law of Congress?

That official OPA speech in effect told these New England oil men and also told all other oil men in the country, that the government was going to so manipulate the volume of their business and costs against a firm price ceiling that a large number of their businesses were going to be destroyed.

Pledges No Price Advance

THE official speech said flatly "that relief at the consumer price level is out". The speech made no reference to the heavy cut in gasoline volume by OPA in the name of rationing. Nor did the speech suggest any relief as to the fixed policy of the administration of not placing a ceiling on wages or farm prices. But the official speech admitted that the listeners' "affairs seem to them just about desperate".

The only compensation suggested to the oil men whose businesses are now wrecked or are about to be wrecked was the patriotic one that "these sacrifices are necessary to achieve final victory". There was also the assurance, described as "no idle rhetoric" that "the industrial front and the financial front are also combat arenas. The risk of failure is there, and the prize of victory is there. It is even heroic because the incentive of public acclaim is almost completely absent."

In other words, the oil man is going to pay whether the country wins or loses and the public will not even know of his heroism. He will be sunk "without trace", as the enemy ordered in the last war.

OPA Law Says Opposite

THIS speech and the statements in it are absolutely NOT supported or permitted by the very law which created OPA Jan. 30, 1942. In fact, the law enjoins on OPA the direct contrary. The law specifically requires that businesses are to be preserved, that they are not to be deliberately put out of existence, that their methods and practices are not to be changed.

Contrast the following extracts from the law as enacted by Congress four months ago with the words and the spirit and the meaning of that official OPA speech.

The law says,—". . .the Administrator shall make adjustments for such relevant factors. . .of general applicability, including. . .general increases or decreases in costs of production, distribution, and transportation. . .subsequent to the year ended Oct. 1, 1941."

The Administrator is enjoined to consider these elements in seeing that the maximum prices he fixes are "generally fair and equitable". He also is instructed to "prevent speculative, unwarranted and abnormal increases in prices; to eliminate and prevent profiteering, hoarding, manipulation, speculation and other disruptive practices resulting from abnormal market conditions or scarcities caused by or contributing to the national emergency."

The law does NOT say that the first maximum price fixed shall be "frozen for the duration." On the contrary, the law contemplates the probability of a need for changing prices and provides for the appointment of an advisory committee from each industry, and also provides for a special court of appeals.

The law does not say that you must "re-arrange your operations so that you can live on the margins you now have" or that you must "attempt to dig your way out of your apparent economic trap before looking for rescue parties from any source." Quite the opposite, the law says that "general increases in costs" shall be considered in fixing a "fair" price.

The law does not say that you must try and chisel a reduction in your purchase price from your refiner supplier. The law does not say that the OPA shall or even can give to that shyster operation "the binding legal sanction of an OPA schedule." In fact, the law does not say, nor do the laws of the country permit it, that OPA can indulge in hi-jacking even though there is a war on.

Nor does the law say you must "streamline" your business according to the con-

cepts of some government agent, in order to get some governmental dispensation that may permit you to live.

Law Silent on 'Social Standard'

PARTICULARLY the law does not say a word about OPA being instructed to determine whether your business is "socially desirable". The law is most specific as to how a business and its prices are to be handled and nowhere does it say that you are to be turned over to a bunch of social minded experts (?) who will decide whether civilization will be better off without you and your tanks and trucks and pumps.

In fact, the law is so solicitous of the citizen's welfare and his getting fair play that it provides for a special Emergency Court of Appeals to be selected by the Chief Justice of the U. S. Supreme Court from district and circuit judges, and the law also says that you can appeal quickly to the U. S. Supreme Court if you think you are being wronged.

The law provides for the payment of a subsidy, but seemingly not under the conditions anticipated by the official speech, for the law says that a subsidy may be paid only to increase production and importation. The official speech talks of reducing the number of producers and distributors and subsidizing the remainder but on this the law is silent. One might say the official speech makes fradulent representations in connection with its coercion.

There is much more to the official speech worth discussing, but we will leave these other points to next week.

Now as to the thought, suggested at the start of this editorial, that perhaps OPA is going to instigate a gigantic price war among the oil companies. That seems to be quite clearly suggested by various passages in the official speech and by other statements of OPA officials including the chief OPAER, Henderson, himself. Anyway a price war is the inevitable result of OPA's own orders.

How 'Battle Royal' is Planned

Here is the idea in a nutshell,—

Oil marketers MUST operate on present sales prices, no change will be allowed.

Even though their gallonage is drastically reduced, and tire, battery and lube oil sales cut to a minimum, they must look to themselves if they would live.

"More volume per company" when all sales volumes have been cut at least 50% is suggested.

To achieve this greater volume per company "a lessened number of competitors" seems to be considered economic.

The "social desirability" of one's business is to be determined, presumably by OPA.

And all this is to be accomplished by

a—some gracious oil men withdrawing from business;

b—some "reasonably minded" men "merging";

c—the rest to do it "by a dog-eat-dog fight for survival".

The main thought in OPA's program seems to be the "dog-eat-dog" or battle royal fight for the survival of what OPA may designate as the fittest.

May not OPA have something to do in designating "the fittest" through the degree of "co-operation" it may receive from the oil marketers it seeks to "educate" to streamline their businesses?

How can OPA hope to hold its present price ceiling on petroleum rigid and make the oil companies "swallow" the rising costs of wages and transportation and particularly the rising costs due to the great reduction in volume because of the rubber shortage and the rationing of gasoline, except to have the companies fight it out?

What more natural solution to some of OPA's troubles than to have the oil companies in a big price war, so busy knifing each other's prices that they have no time to study OPA's methods and go to court about them if they think them unfair or illegal?

And what better "proof" as to the "fairness" of OPA's prices than to have oil prices seemingly "drop" of their own accord, due to the oil companies only and without any "orders" from OPA?

What is more certain but that there will be a "drop" in prices as surpluses accumulate at refineries because of the restricted sales imposed by OPA's rationing order and the rubber shortage?

And it is equally certain that prices will drop if the industry gets into a nationwide price war.

Gallonage the Big Cost Factor

IT HAS long been recognized in the oil industry that the greatest single cost factor is volume of gallonage. Given a big volume of gallons per dollar of investment, expense and costs shrivel to nothing so that price selling operators can offer big differentials under "the market", which differentials in turn insure the attraction of the necessary gallonage to keep the business profitable. But when gallonage shrinks, costs mount rapidly until the station or company is in financial trouble.

The rubber shortage and gasoline rationing are reducing most every company's gallonage from a quarter to a half and more. Company costs are therefore jumping. Companies can only prevent this shrinkage in gallonage by getting customers from competitors and doing it at once. There isn't going to be any increase in consumption due to more cars or more and better roads. Those hopes are out. Oil marketers have just two things to do: cut their costs as much as they can and get the other fellow's gallonage.

Few bulk plants can be closed by the majors and practically none by the Independents unless the latter go out of business entirely. This means that, under the frozen OPA price ceiling and the greatly reduced gallonage, there is only one place for the bulk plant operator to go, whether he is a major manager or an Independent jobber owner, and that is to get more service stations and other outlets, at least of those that survive the shrinkage.

OPA's orders and plans are the most immediately effective procedure that OPA and the administration could invoke to set the industry to fighting within itself for a greater division of the shrinking business that each company needs to keep alive. And by cutting it 50%, the government decreed that there is not enough business to go around and keep every one in business AT PRESENT PRICE LEVELS. OPA's plan at once sets the oil marketers to making a low price that will protect OPA's price ceiling the while it carries out OPA's policy of "dog-eat-dog."

Raids will Lower Prices

WHEN an oil company needs another 1000 gal. of business a week or a month to break even, when a company needs another dealer or 2 or 6 or 10 or a 100, it is easy to imagine what that company will do if necessary to get that increase in volume that promises to keep it solvent.

Majors' salesmen will raid jobbers' dealers and jobbers will slip up to majors' outlets with tempting offers, all of which offers will bring cut prices, anything to get that necessary increase in volume.

Majors will raid other majors' jobbers, and national brand gasoline owners will raid the jobbers of the small unbranded Independent refiners, in order to get the gallonage that promises to keep them alive.

As in the limiting gladiatorial arenas of old, oil men are to be penned by hand of government under the OPA price ceiling and made to fight to the death, fight to kill each other, fight to destroy the businesses that thousands have built up over many years with toil and sweat and thrift and the loyal aid of hundreds of thousands of employes.

These oil men are to fight as the gladiators, to fight among themselves until the stronger have fatally wounded the weaker and they fall. This battle is to keep on, says OPA, until enough have fallen so that the victors, weak from their wounds, believe that they can live on the shrunken volume of business.

Competition is a slaughter of the weak but the rules of the world, particularly as enforced, at least at times, by a Department of Justice, permit prices to rise when honest and justifiable costs rise. When prices do not then rise, a real Department of Justice steps in and sees that the restraining price policy of "the monopoly" is ended in order that the weaker may live and fight, but according to Queensbury rules—the Sherman Anti-Trust and the Clayton acts among others.

This slaughter of oil men, and it will

be specially of small and Independent oil men, OPA is staging in the name of "patriotism" and as a part of this world war to end such inhumanity among nations and among men. OPA is staging this slaughter as part of the civilized world's effort to save and insure the "four freedoms", the while OPA cancels out for the oil industry at least one of those "freedoms".

In the name of God, what manner of beings are these who set themselves above country and its laws and above the rules that have built this civilization for which the rest of our citizens—yes and the sons and brothers of oil men—are fighting?

OPA Goes Contrary to Its Own Stated Objective

WHAT OPA says it wants to do, we know the oil industry is heartily in favor of, but what OPA is actually doing—ruining oil companies—is just the opposite of its alleged objectives.

OPA says—to quote from the official speech—

"The way to prevent the inflationary spiral from developing is to prevent people from paying prices as high as they are willing to pay. We cannot allow the buyer to determine the price level."

To this, we know, every oil man will agree.

But the prices that OPA is blocking are not the buyer's bidding prices, but the prices that are dictated by all the principles of sound business; prices that pay expenses and payroll and protect investment.

The prices that OPA is seeking to block are those required by high cost railroad transportation made necessary by the policy of Navy's MANAGEMENT and the loss of tankers to submarines; prices made necessary by Pearl Harbor and the rubber shortage; prices required by OPA's own ideas of gasoline rationing.

Oil men are cutting their costs in every way possible and they, like all other business men, expect to keep on cutting costs. Some of the best managing talent in the country has been in the employ of oil companies for many years, teaching to major companies and to their jobber distributors better and cheaper ways of operating. Presumably, the oil experts who are now in OPA faithfully contributed to the oil companies who so recently employed and even trained them all of the sound ideas about more frugal management that they have. However, if they still have any new ideas let them present them to the industry and if the industry thinks they are good, the industry will certainly adopt them.

But, so far as we know, there is nothing in this price law nor in any other law that says that the government shall fix prices and set up conditions of doing business that will admittedly have as their chief purpose the destruction of a considerable portion of a great industry.

Stopping prices that lead to inflation is one thing but blocking prices that have nothing to do with inflation, but rather protect the life and service to the war and the public of an essential industry, is something else.

Every Oil Man Should Write About the Rubber Program

If you want Congress to work out a rubber program, out in the open where you can see it, your best chance is to lend your support to the efforts of the Senate small business committee. This committee is behind the bills of Sen. Ellender and Rep. Patman which are now up for hearings shortly. These bills, identical in character, undertake to order the war agencies to provide a given quantity of rubber, both crude and old, to retread satisfactorily 30 million tires a year for each of the next three years.

Whether these bills specify the exact amount of rubber, or name a sufficient number of tires for retreading, at least the bills will bring the issue out in the open; the war agencies will have to meet the requests in the bills specifically; and Congress will finally say, if it wishes, just what the rubber program will be. No longer will it be juggled back and forth in secret between war agencies who may or may not know all they should about the subject.

Write Sen. James E. Murray, who as chairman of the Senate small business committee will see that your views get the best consideration. Tell him whether you approve the idea of Congress telling the war agencies what, if anything, to do about rubber, and tell Sen. Murray, if you would, what you think Congress should do.

The Petroleum Industry War Council, as per news story in this issue, has formulated a report requesting that Congress not only specify a given quantity of rubber for retreads but a certain amount for a given number of new tires. Perhaps that report will give you more ideas to write Sen. Murray about. (See page 22.)

Letters from NPN's Readers

(*Continued from page* 4)

schools, have passed off as outside our province the theories of the instrumentalists and the pragmatists who call themselves "progressive educators", where can the blame be laid if not upon us—ourselves?

Very truly yours,
Joseph W. Butler
Butler Oil Company

* * *

May 23, 1942

Editor, NPN:

May I again compliment you on the courageous and determined fight you are making to have some order and sense applied to this matter of rationing of gasoline and rubber. I do not feel that the Administration has yet visualized the full economic destruction that will be wrought in all forms of retail business by the drastic curtailment of automobile transportation. Your article in the May 20th issue of NATIONAL PETROLEUM NEWS is most excellent, and I hope that you will see that it gets into the hands of such leaders in Congress as Senators Byrd, George, Connally, Maloney of Connecticut, Taft and Johnson of Colorado, as well as such men of the House as Summers, Speaker Rayburn, Wadsworth and Reed of New York and others.

It seems to me that, if I may respectfully make a suggestion, you can now afford to spend considerable space and effort upon the necessities of, and the motives behind, the proposed seizure and allocation of automobiles in the alleged interest of rubber conservation.

For example, you might well ask why these proposals are necessary in view of the fact that there are today over 7,000,000 new tires in the hands of the Government or tire dealers, which at the rate they are being doled out, might last ten years; what is becoming of the hundreds and hundreds of thousands of good used cars and their good used tires; what is to become of the several hundred thousands of new cars and their new tires, before it could possibly be necessary to confiscate anybody's car to alleviate passenger transportation shortage. You might ask, also, why the proposals of Elliot Simpson, (a rubber expert who appeared before several Congressional Committees), to make good tires out of reclaimed rubber with only a tiny proportion of new rubber added, have not been more thoroughly investigated by our bureaucrats. You will recall that Mr. Simpson has testified that there are many millions of tons of good reclaimable rubber in this country from sources such as old rubber shoes with crepe soles, etc., that could be reclaimed in great quantity without almost no additional expenditure for hiking the producing capacity of rubber reclaiming plants, and that one Congressional Committee is now trying out tires made, under Mr. Simpson's guidance, by the Norwalk Tire and Rubber Company, out of almost pure reclaim.

You might ask also if the public is not entitled to be informed as to what the progress is, as to the setting up of plants to make synthetic rubber. And you might add the suggestion that it would be a good thing perhaps for the morale of our people, if instead of threatening to take their cars away from them, a drive were put on to enlist them in a campaign to pick up and take to their work such essential workers who may at some future time find themselves without adequate transportation facilities.

Further, you might suggest that there will be a lot of people in this country who will feel more like destroying their own cars or defending them with a shot-gun rather than have the Government take them over to give them then to some slap-dash driver who, through no patriotic impulse of his own, now finds himself listed as a "war worker."

Finally, it's a comfort for a man like me to find a man like you who is not afraid to use the opportunity he enjoys to maintain such a brave, and probably dangerous, struggle against the encroachments of a rampant bureaucracy. Please keep up the fight!

Sincerely,
A Subscriber

* * *

Dallas, Texas,
May 27th, 1942

Editor, NPN:

In reply to your letter of May 21, you very ably present the oil situation in your article in the issue of May 20, the reprint which you kindly forwarded to me.

If we are going to win this war we will have to do some analyzing along the lines in your article, which is not critical but is constructive advice about an industry with which you are familiar.

I hope the authorities will give some consideration to your very able presentation of the facts brought out.

Very sincerely,
F. J. Lucey, president,
Lucey Petroleum Co.

* * *

Minneapolis, Minn.
May 23rd, 1942

Editor, NPN:

Dear Sir:

Thank you for your splendid editorial in this week's NATIONAL PETROLEUM NEWS on the subject of NAVY MANAGEMENT.

It would be worth while to give wide publicity through reprints of this editorial;—especially should it be placed on the desk of every House Member and Senator in Washington.

Very truly yours,
K. C. Nielsen

Washington Personalities

Channing R. Dooley . . . Industrial 'School Teacher'

Channing R. Dooley is an engineer who turned into an industrial school teacher.

Loaned by Socony-Vacuum Oil Co., where he was Manager of Industrial Relations, to the old National Defense Advisory Commission in August, 1940, for 3 months—Mr. Dooley has been here ever since and is now Director of the Training within Industry section of the War Manpower Commission.

He directs an advisory organization which helps employers establish programs to train employes on the job, at company expense. His organization does no actual training.

However, it could if necessary, because Mr. Dooley developed the Westinghouse Technical Night School and directed training programs for Standard Oil Co. of New Jersey and Socony-Vacuum.

He says the oil industry may not feel the same need for speed in training workers as do expanding munition plants and shops, but the industry could well adopt the same principles to train each man thoroughly, and quickly, for a particular job.

The system of training within industry, as advocated by Mr. Dooley, is to break down each job into its fundamental operations and then intensively drill the worker in each operation.

Outlines Steps for Training Personnel

When the job is thus broken down, Mr. Dooley says, these 4 steps should be followed:

1—Find out what the worker already knows, and start from there. Put him at ease. 2—Describe the operation, and refrain from presenting several new ideas at once. Ask the worker questions. Make certain key points are understood. 3—Let the worker try the job. Watch him perform. Explain his mistakes. Have him do it again. Have him explain back to the instructor. Don't embarrass him with disparaging remarks. 4—Then put him on his own and "watch him until he gets the feel." Check him frequently.

Mr. Dooley, born in Rockville, Ind., on April 4, 1878, graduated from Purdue in 1900 with an electrical engineering degree. After 2 years of postgraduate work, he joined Westinghouse in 1902, remaining there 17 years.

Directed Technical Night School

His main job, when he started with Westinghouse, was designing electrical machines. At the end of two years, he had charge of the company's Casino Technical Night School which taught young employes elementary electricity. He reorganized the school and turned it into a going concern.

At the end of 7 years, he was designing machines all day and teaching at night. By that time, the school had an enrollment of 500 to 600 students (it reached 2000 by 1919).

Its expansion had attracted the attention of Westinghouse President E. M. Herr who told Mr. Dooley: "If you want to take a crack at it, give it your whole time."

When the World War struck the U. S., he was called, in the summer of 1917, by the War Department's classification committee to put in a classification system at Camp Sherman, Chillicothe, Ohio. That classification system, directed by Dr. Walter Dill Scott, is the basis of the present-day system.

He was at Camp Sherman for 3 months, but in April of 1918, the War Department Committee on Education and Special Training named him educational director in working out a program to train soldiers in vocations needed by the Army. In just a few weeks, he had the program going in 140 schools where the men were sent instead of to an Army camp. About 150,000 men went through the schools where 30 or 40 major vocations were taught.

Channing R. Dooley

Entered Oil Industry in 1919

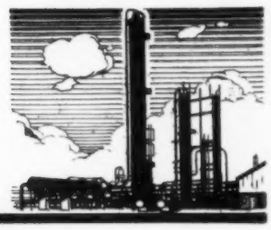
After the war, he returned to Westinghouse, but joined New Jersey Standard in June of 1919 as personnel and training director. He organized the basis for advancement of men through refineries and developed "snappy" training of service station men.

In March of 1929, he went to New York Standard which subsequently became Socony-Vacuum, where he had charge of union negotiations, contracts, wage studies and training. He worked out a complete labor relations program—vacations, sick leave, wages and pensions.

He says he likes to sail, but "golf bores me to death". At home, he is what his friends term a "gadgeteer".

If something will save labor at home, he has it. He has a cellar full of tools, built a ventilating system for his Summit, N. J., home, made all of his own radios until a few years ago when they became too complicated, and was working on a button-system to open his garage door when he came to Washington.

REFINING NEWS



Gulf Coast Gets Big Share In Synthetic Rubber Plans

NPN News Bureau

CLEVELAND — That the Texas Gulf Coast will receive a large share of the vast program for producing synthetic rubber from petroleum bases is evident in projects announced or definitely planned.

One of the big projects was announced June 3 by Humble Oil & Refining Co. The government will build a $16,000,000 butadiene plant and a $16,000,000 plant for the production of Butyl rubber. When completed, both will be leased by Humble and operated by it under contract with Rubber Reserve Co., a subsidiary of RFC. Total investment in the complete project will be $43,000,000, with Humble making part of the investment in its refinery for the production of raw materials.

Plan '43 Completion

Although no mention was made in the announcement of when the plants will be completed, it was reported that they are planned to be in operation by the spring of 1943.

In its announcement, Humble said:

"Research work now in progress may develop Butyl rubber into a product satisfactory for use in automobile casings. For the present, however, its greatest usefulness in the war program is in the manufacture of rubber specialty products and in releasing natural rubber and Buna rubber for use in automobile tires."

It was reported that Goodyear will participate in this program with Humble and the government.

Due to be announced shortly is a synthetic rubber program in which Sinclair, the government, and Goodyear will participate, with the plants to be near Houston. Contracts already have been made between Sinclair and Goodyear, with the oil company to supply base materials for a government-built plant which Goodyear will operate. All plans and negotiations virtually are completed and it is believed actual construction will be started within 60 to 90 days.

Other Plants Planned

Monsanto Chemical Co. is converting the old Texas City sugar refinery into a plant which will manufacture bases for synthetic rubber. Little has been revealed about the Monsanto plans, although it was said at the beginning that the project would cost $3,500,000 and later said that the company was doubling original plans. The company has about 45 acres on which the project is being carried out.

Early in the year it was revealed that Firestone Tire and Rubber Co. had taken option on 225 acres near the Carbide and Carbon Chemical Co. plant at Texas City, which also produces chemical bases for synthetic rubber. It was believed that Firestone would use rubber bases from both plants for its finishing plant, which reports said would be one of the largest in the nation.

First producer of butadiene in this sector was Shell Oil Co. at its Houston refinery. A $2,000,000 plant was completed and put on production a year ago. This has been moving north by tank car, but it is believed that when Shell expands its butadiene plant facilities, a finishing plant will be erected nearby.

A group of Texas independent oil men and bankers, in a firm headed by Maco Stewart of Galveston, are pushing plans for the processing of acetylene from gas by a process developed by Dr. E. P. Schoch of the University of Texas. Money has been subscribed among the oil men and bankers to build plants for the processing of acetylene and government aid is being sought for plants to process the acetylene into butadiene and then into synthetic rubber.

Another huge program is under way in the Port Neches area of the eastern Texas Gulf Coast, near the huge Texaco and Gulf refineries at Port Arthur and the Atlantic refinery at Port Neches. These companies will operate a government-built plant for the production of butadiene and a rubber company will operate a plant for conversion of the butadiene into Buna type synthetic rubber. While no announcement was made as to total cost of this project, it was reported at around $40,000,000. The companies formed the Port Neches Butane Products Co. to operate the plants.

Refinery Operations

(American Petroleum Institute figures in barrels of 42 gallons. Figures are U. S. totals and are on a Bureau of Mines basis. Breakdown by districts will be published in June 17 NPN.)

	Week Ended June 6, '42	Week Ended May 30, '42	Week Ended June 7, '41
Crude runs to stills (Da. avg.)	3,451,000	3,522,000	3,909,000
Gasoline production at refineries including natural blended	10,310,000	10,478,000	13,158,000
Finished & Unfinished gasoline stocks	93,305,000	95,355,000	91,890,000
Gas oil & distillate stocks	31,535,000	31,384,000	36,206,000
Residual fuel oil stocks	79,556,000	79,628,000	91,961,000

New OPC Division Assistants Named

NPN News Bureau

WASHINGTON — E. Holley Poe, director of Office of Petroleum Co-ordinator's newly-created Natural Gas and Natural Gasoline Division, will be assisted in his new position, OPC says, by following men:

Paul Raigorodsky, formerly assistant of production division, continues duties as assistant director of the new division.

R. W. Ducker, with Oklahoma Natural Gas Co. for 11 years, will be chief of the natural gas section and James E. Pew is slated as chief of the natural gasoline division. Mr. Pew has been with OPC for some months as senior specialist on natural gasoline in the OPC production division.

J. Woodward Martin will handle liquefied petroleum gas problems in the natural gasoline section. Mr. Martin was with Lone Star Gas Co. for 19 years, the last 5 as manager.

Thomas R. Weymouth will be a consultant in the natural gas section. He comes to OPC from the Columbia Gas and Electric Corp. where he was a vice-president.

District Directors

The 3 permanent district directors of OPC's new division are:

Frank M. Brewster with Virgil F. Bowyer as assistant—District 1; D. E. Buchanan with M. L. Mayfield as assistant—District 3; and Kenneth Reynolds with Reed G. Garman as assistant—District 5.

Mark S. Patton is assistant director in District 2, but no director has yet been appointed for this district, or for District 4, an authoritative source says.

RFC Revises Most Rubber Contracts To Use Butylenes

NPN News Bureau

WASHINGTON—Within past few weeks, RFC has rewritten most of its synthetic rubber contracts so that majority of plants now being built will manufacture butadiene from butylene instead of butane, Rubber Co-ordinator Newhall today told special Senate agriculture subcommittee.

Committee spent most of today's hearing trying to determine exactly what agency is responsible for synthetic rubber program, with Committee Chairman Gillette, Iowa, asking what Mr. Newhall thought of some central agency to make synthetic rubber decisions. Mr. Newhall replied that War Production Board Chairman Nelson had such authority.

Asked About Authority

Then why does Mr. Newhall as deputy to Mr. Nelson only "recommend" certain synthetic rubber action to RFC, Sen. Norris, Nebr., inquired. Mr. Newhall's legal counsel gave a long explanation which the committee didn't seem to comprehend because the same question about authority was repeated throughout the hearing.

RFC Chairman Jones, in his capacity as a member of WPB, might agree that construction of a certain synthetic rubber plant was advisable but in his capacity as RFC chairman might turn it down on grounds that it wasn't a good financial risk, Mr. Newhall said.

Materials Needs Compared For Butadiene Processes

NPN News Bureau

WASHINGTON — Record of Gillette committee, investigating industrial utilization of farm crops, especially alcohol for synthetic rubber, now contains a comparison of critical materials needed for plants making butadiene from petroleum and alcohol.

In the course of questioning Materials Director A. I. Henderson of War Production Board on June 5, Committee Counsel Paul Hadlick said a priority application showed Humble Oil and Refining Co. would need 9306 tons of steel, 260 tons of copper and brass, 60 tons of stainless steel, 4 tons of aluminum and 112 tons of chromium for a 30,000-ton plant to make butadiene from petroleum.

Union Carbide and Carbon Co., he said, would need 9395 tons of steel, 650 tons of copper and brass, 19.5 tons of stainless steel and no chromium or aluminum for a plant of the same size but using alcohol as the raw material for butadiene.

Information given the committee, he continued, showed that a 30,000-ton butadiene plant using a Polish process of converting agricultural alcohol into butadiene would need 1641 tons of steel, 510 tons of copper and brass, 7 1/3 tons of stainless steel and no aluminum or chromium.

Favors Natural Rubber

Dr. Earl N. Bressman, agricultural director of Office of Co-ordinator of Inter-American Affairs, listing 3 methods of making butadiene from alcohol, suggested it would be better—from a long range point of view — to stimulate natural rubber production in the Americas rather than to risk depletion of oil, and possibly agricultural, resources as synthetic rubber supplies.

He said oil resources would be "exhausted" sometime within the foreseeable future and "we must consider whether it is wise to hasten this eventuality by a long-time program of making rubber out of petroleum." Soil, too, would be depleted in raising crops for alcohol, he added, unless properly handled.

"And this," said Dr. Bressman, "is precisely where our long-range rubber development program in Latin America would come in. In the long view of the problem, its success will contribute materially toward conservation of our oil resources and of our fertile agricultural land."

If the job of organizing materials and men can be achieved, Latin America would produce 80,000 tons of natural rubber and 10,000 tons of guayule annually, he added.

While advocating development of all possible emergency sources of rubber, Dr. Bressman said the "scorched earth" policy had been carried out in Malaya only to the extent of damaging machinery, and the Far Eastern plantations would take only a year or two to resume production.

"Recalling that Far Eastern rubber had once sold for as little as 3.5c per lb., he said such a price could not be maintained indefinitely but could be held long enough to strangle competition from a synthetic rubber industry that was not government-subsidized.

He said the 3 alcohol methods are "2-3 butylene glycol" which still has some "bugs" in it; butyl alcohol which recently has reached the commercially feasible stage; and ethyl alcohol which is being used by Carbide and Carbon.

Dr. Bressman also said 100 co-operative nurseries with 30,000,000 budded rubber trees have been established in 15 Latin American countries.

Henderson Explains

A. I. Henderson was called before the committee to explain a May 25 press release saying 550 tons of steel plates, 790 tons of structural steel, 70 tons of copper and 4 tons of bronze are necessary for a 2,500,000-gal. alcohol plant.

Mr. Hadlick introduced a letter from Leo M. Christensen of Nebraska Chemurgy Project, holding that Mr. Henderson's announcement contained "bad blunders". Mr. Christensen, translating those figures into a 10,000,000-gal. plant, said they showed the need for 5360 tons of steel, and 296 tons of copper and copper alloy.

He said an Atchison, Kan., plant, in which Office of Price Administration concurred on materials estimates, would have needed 360 tons of steel and 90 tons of copper and copper alloy.

Farm Crops Processing Co., Mr. Christensen added, has been working on plans to reduce materials consumption in a 10,000,000 gal. plant which, with substitutions for critical materials, would need but 240 tons of steel and 18 tons of copper.

New Construction Policy Won't Hamper 100-Octane, Synthetic Rubber Plants

NPN News Bureau

WASHINGTON — Synthetic rubber and 100-octane plants probably will not be adversely affected to any material degree by the wartime construction policy recently enunciated, but apprehension that materials difficulties may cause trouble in these programs has been noted on the part of high officials.

The construction policy, contained in a directive of War Production Board, Army and Navy, said no construction project could proceed unless a responsible government agency finds that it meets 7 newly-established criteria.

Purpose of Directive

Purpose of the directive, made public May 30, is to divert raw materials into actual munitions production instead of using them in new plants, especially those that will not be producing for some time.

A source close to WPB Chairman Donald M. Nelson—who signed the directive along with War Secretary Stimson and Navy Secretary Knox—said there was no question about synthetic rubber plants and 100-octane plants being considered essential and therefore unaffected by the order.

An official of the Reconstruction Finance Corp., which is financing both types of plants, said it was expected that such plants would go ahead full speed. An official of office of Petroleum Co-ordinator felt the same way.

Chairman William L. Batt of WPB Requirements Committee refused to discuss the subject at a press conference recently, but said WPB has long recognized these plants to be essential and felt they should be "carried along".

At his June 4 press conference, Petroleum Co-ordinator Ickes was asked if there had been any trouble in securing critical materials for 100-octane or synthetic rubber plants. Deputy Co-ordinator Davies replied "not *so far*", emphasizing these words by repeating them.

The directive, which ruled that construction in general "shall be of the cheapest temporary character" with structural stability sufficient to last only through the war, said all projects, before they could proceed, must be found by a responsible government to meet these criteria:

1—It is essential for the war. 2—Postponement would hurt the war effort. 3—It is impracticable to rent or convert existing facilities. 4—Construction would not result in duplication or unnecessary expansion of existing plants or facilities now under construction or about to be built. 5—All possible economies have been made in the project, resulting in deletion of all non-essential items and parts. 6—Project is designed in simple style, sufficient to meet only minimum requirements. 7—Sufficient labor, public utilities, transportation, raw materials, equipment are available to build and operate the plant, and the finished product can be used at once or stored until needed.

May Split Program For Making Rubber

NPN News Bureau

WASHINGTON — President Roosevelt is considering a proposal that the 200,000-ton alcohol-butadiene project be separated from rest of the synthetic rubber program and be given to a "friendly" governmental agency to handle.

Senator Gillette, Ia., is understood to have suggested this on June 8 when he discussed "alky rubber" with the president at the White House.

By "friendly" agency, Senator Gillette may have had in mind Agriculture Secretary Wickard or some set-up under Leon Henderson. Both have advocated making rubber from agricultural alcohol in appearances before the Gillette committee.

Meanwhile, there are demands that responsibility for the petroleum-butadiene program be given to a single governmental agency with authority to pool patents, choose processes, contract for plants, arrange for "emergency" or stop-gap supplies of butadiene from petroleum sources. In other words, some agency that could speed the petroleum rubber projects from the drafting board-pilot plant stage to commercial production. And logical choice for such a job is Petroleum Co-ordinator Ickes.

Refining Technology

INCLUDING INTERNATIONAL PETROLEUM TECHNOLOGY

Use the New NE Steels, Specify to Meet Operating Conditions Only, WPB to Tell Petroleum Refiners

● The word from Washington that the War Production Board will "formalize" the new NE (National Emergency) steel specifications focuses attention on the progress the steel industry has made in providing for the petroleum industry and other big consumers, alternate materials for the former high chromium and nickel content steel. While refiners will have to continue to use the chromium alloys, the extent depending principally on the type of crude run and process operated, authorities believe they will find the new NE steels can be used in many places where formerly alloy material was specified, particularly since the new refining units are being designed for a three-year life.

When the shortage of chromium and nickel and other alloy metals for steel became apparent as the Defense program called for greater volumes of steels of all kinds, the metallurgists and engineers from the steel companies, working with the WPB, set up the new specifications on the basis of availability of the alloying elements. Substitutions of the NE steels for alloy compositions formerly standard have already been effected in considerable volume and other substitutions are said to be under way.

Through co-operation of a number of large consumers with the steel producers, test data is being rapidly accumulated on the new NE steels. This data is now being correlated and compiled through the American Iron and Steel Institute. Through the steel suppliers it will be made available to steel consumers for their use in specifying material both for new plants and for replacements. Other service data will be made available as soon as tests have been completed and the data compiled and compared with that from similar tests by other concerns. That it is most important for refiners to use the new steels wherever practicable is to be seen from the fact the War Production Board, in passing on new refinery projects, is sending back to the oil companies to be rewritten, designs where alloy steels are specified but where milder steels will serve without appreciably increasing downtime for a three-year life.

Since at present, data on performance of the new NE materials is by no means complete, authorities in the steel industry advise the refinery engineers to work with the steel suppliers in determining the applications for the new steels. The NE specifications do not cover steels with over 1% of chromium, so refiners, in many instances, will have to continue to use the chromium steels for still tubes, vessel linings and other places. The present program for designing plants with a three-year life will allow smaller proportions of chromium and other alloys to be used than was formerly refiners' practice. Under the new order of things, refiners will be also called on to specify material to meet existing operating conditions only, in place of ordering materials to meet more severe requirements than were actually experienced. In some recent cases, chromium content in still tubes has been lowered to 1.25%, it is said.

Thus far, data is also lacking on the performance of steels in the new catalytic alkylation units where sulfuric acid and hydrogen fluoride are used as catalyst agents. Here again some information is said to be available for the refiners from steel suppliers who have had experience in meeting similar operating conditions in the chemical industry.

In commenting on the general progress the steel industry has made in producing the low-alloy steels, starting before even the defense program was undertaken, Walter S. Tower, president of the iron and steel institute, said as follows at the recent annual meeting of that association:

"New techniques are being introduced. Others will appear and all of them will have been pretty well perfected under the stress and necessity of maximum efficiency and production. The skill in producing low-alloy steels and alternate specifications for the more exacting requirements of the past will have brought evolutionary changes in the art and practice of steel-making, which might not have come for a generation, if ever, under other circumstances. Whole groups of steels prominent and popular in the past may find themselves permanently relegated to secondary place."

Study Own Plant Data

In their selection of steels to specify for new plant construction or replacements, during the war emergency, refiners should take full advantage of all data available in their own companies that will give any indication of what steels have performed satisfactorily in the past.

The fact that corrosion conditions particularly vary in the individual plant, according to the nature of the crude used, process installed and the conditions under which it is operated, have made it difficult in the past to set up specifications applying to even a group of refiners in one district. However, the local refiner often can get some indication of the performance of the steels used in the past by studying his records to learn when replacement parts have been installed, how long they were in service, and what kind of steel was used. Refiners can list these materials in order from the most to the least suitable for the specific installation. In specifying materials today, where the most preferred materials are not available from the steel companies, those further down the refiner's list can be studied, in the light of their past performance, to see if they will not satisfactorily meet the needs of the plants refiners are called on to build today.

In considering steels for their heat resisting qualities, the individual refinery should have considerable data on the actual temperatures the materials have to withstand. They can be ordered to meet these actual temperatures,

in place of ordering steel with a wide margin of ability to withstand higher temperatures, as many refiners have done in the past. In place of full castings for furnace walls, or single plates for walls of towers, where only the interiors have to withstand high temperatures, the refiner can take up with his supplier the possibility of using linings or interior walls to meet these high temperatures, and other materials for the exterior walls or other points where lower temperatures are experienced.

Will Help in Collecting Scrap

Use of a smaller number of grades of steel in his plants, as the NE specifications call for, will help the refiner, in his scrap collection program, to sort the metals by alloys, which is important for the steel mills in their recovery of the alloys from scrap. In general the word from the steel companies, as emphasized at the recent meeting of the American Iron and Steel Institute in New York, is to keep up the flow of scrap from the refineries to the steel mills this summer and fall. The shortage of scrap was said to still remain one of the acute problems confronting the steel companies in their efforts to produce the maximum tonnage of steel for war and essential industry needs.

Steel making capacity will be operated to the fullest extent this winter, when scrap collections normally fall off. A large volume of the scrap now being collected is coming from non-recurring sources, such as rails of abandoned trolley lines, so when it is once used up no more will be forthcoming from that source. The new pig iron furnaces which are being built to supply more raw material for the steel mill furnaces will not be fully completed this winter. So oil company executives, as well as those of other industries, are being asked to push through their program for scrapping obsolete equipment in order that, by winter, a scrap backlog can be built up at the mills to fill the gap until more new pig iron furnaces are completed.

Outproducing Our Enemies

For a heartening glimpse, for an American, at the war performance of the steel industry as reported at the institute meeting, here is what President Tower said on that point: "The United States alone has been producing recently each month, about as much steel as Japan probably is able to produce in a year. Your industry can make every six days as much as Italy can make in six months, and it is producing at nearly three times the probable rate of all the European industry which is under German control or is available to Germany. To put it another way, the United States alone has double the critical strength, measured in tons of steels, that is now possessed by all the enemy countries."

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"Substitute" Steel Is Topic For A.S.T.M. Meeting

A round-table discussion on the so-called alternate steels and on the conservation of strategic alloy metals used by the petroleum among other industries, is a feature of the program for the 45th annual meeting of the American Society for Testing Materials at Atlantic City, June 22-26. At this round-table, to be held June 24, important developments in the metals situation resulting from the war emergency will be presented and the opportunity extended for questions from the floor.

One topic for this session is an outline of the work carried out by the Alloy Technical Committee of the American Iron and Steel Institute in establishing the "8000 series" of alternate steels and the steps taken to put them into commercial practices include:

Status of raw materials—strategic elements.

Steps taken by the automotive, petroleum and other industries to effect the conservation of alloy metals.

Plans made by steel producers and government agencies to conserve elements in stainless steel. Also steps taken by steel producers to conserve magnesium, aluminum and other strategic elements and changes made in steel production methods to conserve steel.

John Mitchell, metallurgical engineer, Carnegie-Illinois Steel Corp., will be general chairman and leader of this A.S.T.M. session.

At the session on steel, ferro-alloys and effect of temperature on properties of metals, June 24, a committee report will recommend revisions in chemical composition requirements of the chromium and chromium nickel sheet, plate and strip specifications to bring them into agreement with current practice and with the type of compositions adopted by the American Iron and Steel Institute. Tables of data on the chromium and chromium-nickel steels have been prepared, it is announced.

Three proposed tentative standards for petroleum products are included in the report of A.S.T.M. Committee D-2 on Petroleum Products and Lubricants, of which T. A. Boyd, Research Laboratories Division, General Motors Corp., Detroit, is chairman. These tests are for neutralization number of petroleum products by color indicator titration and by electrometric titration, and for rust preventing characteristics of steam-turbine oils in the presence of water. Test results in support of the latter method are included in the report. The test for saponification number revised to indicate the reproducibility of the test as applied to fats and fatty oils is also appended.

Appended to the report as information are a proposed method of test for color of lubrication oils by photoelectric colorimeter, tests for oxidation characteristics of heavy duty crankcase oils and a proposed test for oil content of paraffin wax; also a further revision of the proposed test for potential gum in aviation gasoline first proposed in 1941.

Edgar to Deliver Marburg Lecture

Dr. Graham Edgar, Ethyl Gasoline Corp., will deliver the 17th Edgar Marburg lecture of the society, June 24, on the subject "Gasoline—Past, Present and Future". His lecture will discuss the close relationship betwen the characteristics of gasoline and those of the internal combustion engine and the significance of the A.S.T.M. tests for gasoline together with the trends of the physical and chemical nature of motor fuels over a period of years.

In 1924, after serving on the faculty of the University of Virginia, Dr. Edgar went to Dayton with the General Motors Chemical Co. When the Ethyl Gasoline Corp. was formed, he became director of research, in which capacity he remains, becoming also vice-president in 1932. He is the originator of the octane number scale now internationally used as a measure of anti-knock value.

The purpose of the Edgar Marburg lecture is to have described at the annual meeting of the American Society for Testing Materials outstanding developments in the promotion of knowledge of engineering materials by leaders in their respective fields. The lecture honors the memory of Edgar Marburg, first secretary of the Society.

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Suggested Standard Method for Calculation Of High-Pressure Gas Measurements*

By Donald L. Katz**

In the measurement of high-pressure gas from distillate wells, standard procedure is suggested for obtaining the correct compressibility factor to account for the deviation of the gas from ideal gas laws. This paper was given as part of the continuing study of the Gas Testing Committee of the Natural Gas Assn. in establishing uniform methods for sampling, testing and measuring gas from distillate wells. It was presented at the annual convention of this association in Tulsa, May 14-15, as Part 2 of the report on High Pressure Gas Measurement. Part 1, Density of Natural Gases, is omitted.

A STANDARD procedure for converting orifice meter readings on high pressure gases into quantities of gas flow is desirable for the natural gas and natural gasoline industries. Such standards have been used for low pressure gases for many years and cover most of the procedures for high pressure gases.

The chief item upon which complete agreement has not been reached is the correction for deviation of the gas from ideal gas laws. The compressibility factor method is generally accepted and the lack of agreement lies in the method of choosing this compressibility factor for specific cases. The prime purpose of this paper is to suggest standard procedures for selecting meter correction factors to account for the compressibility of the gas flowing. A brief discussion of measuring the flow of two phases is included.

The Meter Formula

The formula used to compute the flow of natural gas from the meter readings may be written as follows:

$$Q = C \sqrt{\frac{1}{G}} \sqrt{\frac{520}{T_f}} \sqrt{\frac{1}{Z}} \sqrt{P \times h} \quad \text{..Eq. (1)}$$

in which Q = cu. ft. of gas at 60° F. and base pressure such as 14.65 lbs./sq. in. abs. flowing per unit time.

C = orifice coefficient depending on diameter of orifice, diameter of pipe, units of h, standard gravity of gas flowing, etc.

G = gas gravity or molecular weight of gas divided by 29.0, the molecular weight of air.

T_f = Absolute flowing temperature of gas, °F. + 460.

Z = compressibility factor at flowing temperature and pressure $= \frac{PV}{RT}$.

P = absolute flowing pressure lbs. per sq. in.

h = differential across orifice, usually in inches of water.

The general procedure is to consider the first three square root terms as correction factors and the equation then becomes:

$$Q = C \times F_G \times F_T \times F_Z \sqrt{P\,h} \quad \text{.....Eq. (2)}$$

in which $F_G = \sqrt{\frac{1}{G}}$ the gas gravity correction factor when C is for a gas gravity of one

$F_T = \sqrt{\frac{520}{T_f}}$ the gas temperature correction factor from base temperature of 520° F., 60° F. to flowing temperature

$F_Z = \sqrt{\frac{1}{Z}}$ the deviation factor or the proper function of the compressibility factor to correct the ideal gas density for deviation from ideal gas laws.

Since the factors can be easily combined, it is suggested that the following nomenclature be considered:

$F_{TZ} = F_T \times F_Z$ and $F_{GTZ} = F_G \times F_T \times F_Z$

The appearance of the compressibility factor in the final orifice equation as a square root of the reciprocal of the factor is due to its appearance in the original form both to correct the density of the flowing gas and to convert the volume of gas at the flowing pressure to standard volumes.

Several combinations of correction factors may be made for actual meters. For example, the gravity of the gas may remain relatively constant and then the F_G may be combined with the orifice coefficient C. This leaves the temperature and deviation factors to be evaluated and, since temperature is a variable in both, the use of a combined temperature-deviation factor, F_{TZ}, is suggested. It will later be demonstrated that all three correction factors are a function of temperature, pressure and gas gravity. Therefore, the combination of all three into a gravity-temperature-deviation factor, F_{GTZ}, should simplify meter calculations without any sacrifice of accuracy.

These suggestions are in line with previous discussions of high pressure metering (1) (12) (13) (14) (15). The orifice coefficient should be in accord with the best practices for heavy walled pipe (11).

Pseudo Critical Temperatures and Pressures For Gases from the Same Field

The computation of the meter factors including the deviation from ideal gas laws for cases in which the gas analysis is known is straight forward. However, the problem in the natural gas and natural gasoline industry is to find an easily determined characteristic of a gas which will identify its pseudo critical conditions and hence its compressibility factors. The most convenient measurement to consider is the gravity of the gas or molecular weight divided by the molecular weight of air, 29.0 (1) (2).

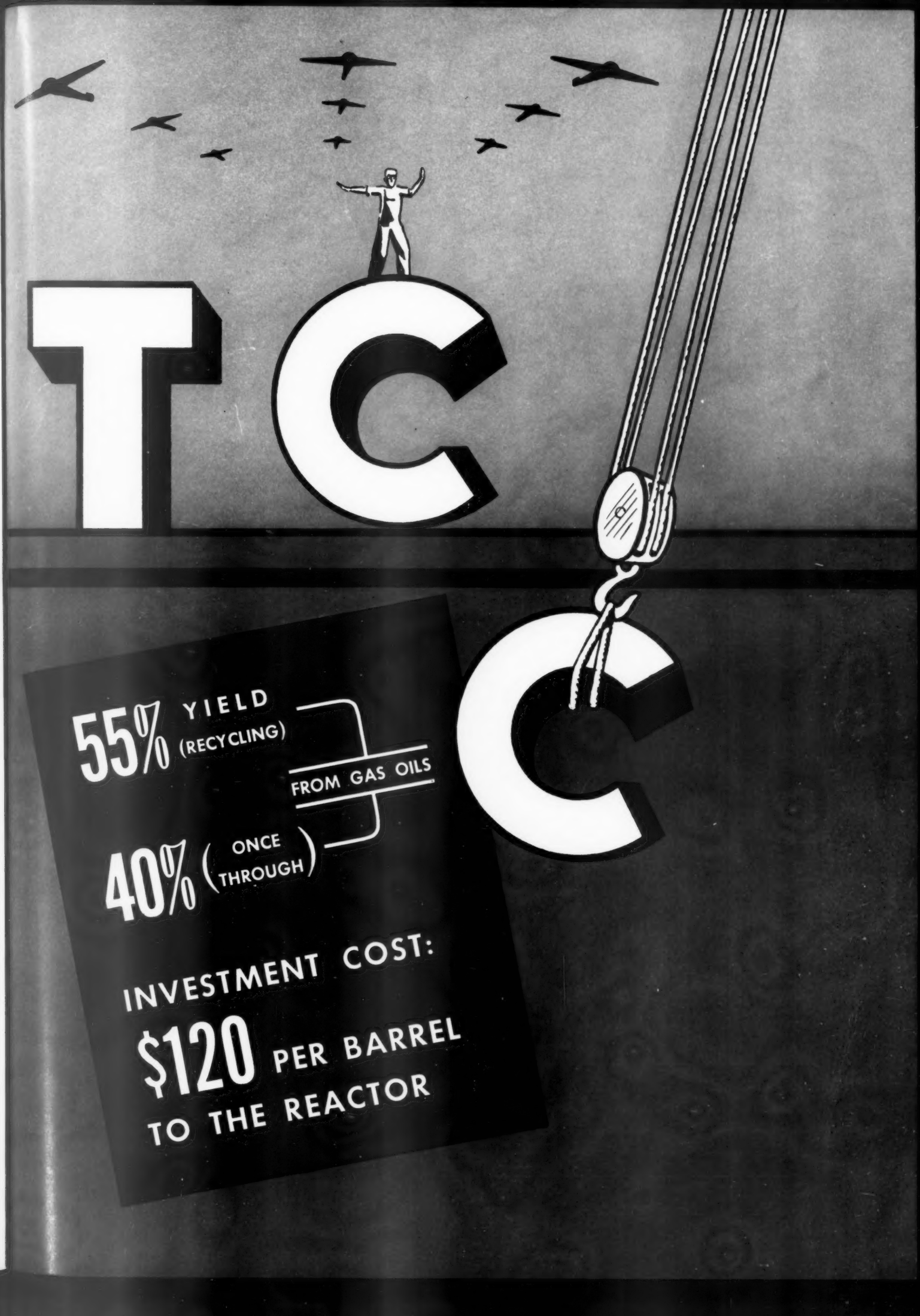
Gases from a given field usually are similar in nature even though of different composition. These gases have been found to give a smooth curve for gas gravity as a function of pseudo critical temperature and pressure. To analyze the behavior of the gases from one field over a period of several years, Oklahoma City (Wilcox) gases were chosen as an example. Fig. 7 is a plot of the pseudo criticals calculated from the analyses of a series of gases including high pressure equilibrium vapors, separator gases, plant intakes and plant residues. Table IX lists the results of calculations on these gases which are probably typical of the gases over the life of a Mid-Continent reservoir.

Fig. 6 presents data on gases of a Grapeland recycling plant and Table X presents the results of computations for these gases. Three gas analyses were available on each of six days spread over more than a year. The high pres-

*Presented at the annual meeting of the Natural Gasoline Assn. of America, Tulsa, May 14-15.

**University of Michigan.

The numbering of charts and tables in this article corresponds with the official text for Part 2 of the report on High Pressure Gas Measurement. Part 1, Density of Natural Gases, is omitted here.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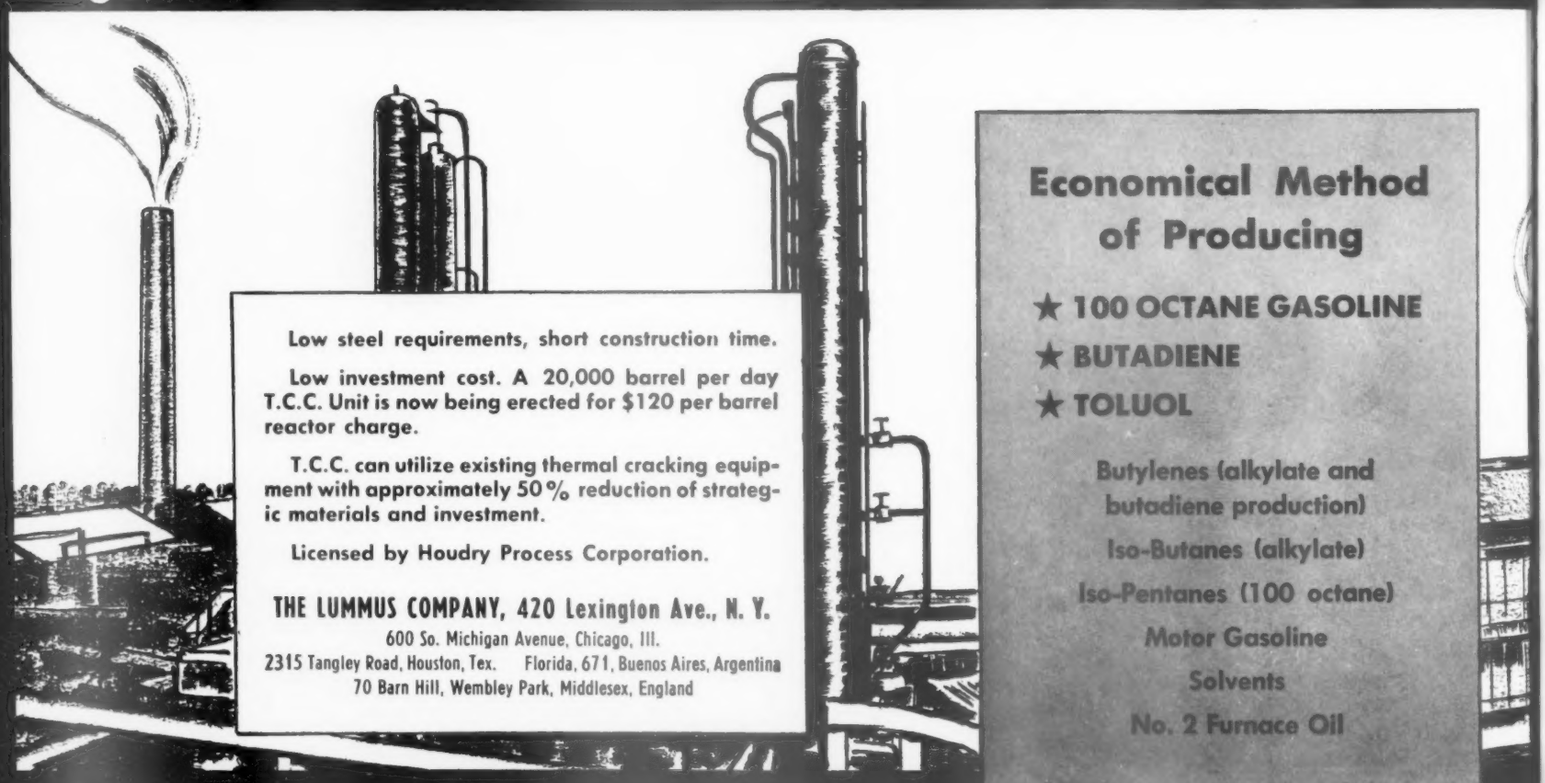

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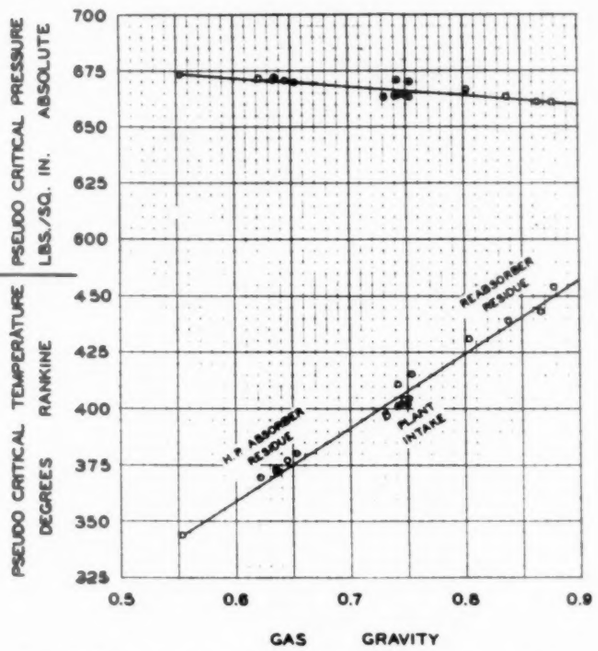


Fig. 6—Pseudo critical properties of Grapeland gases

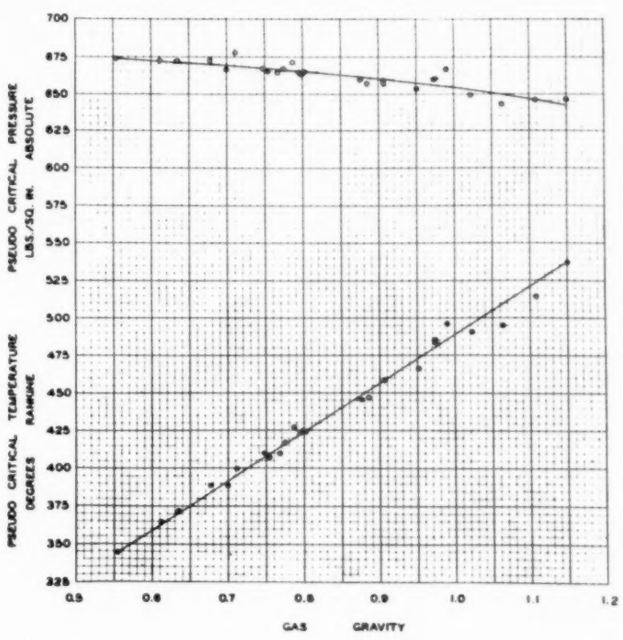


Fig. 7—Pseudo critical properties of Oklahoma City gases

TABLE IX

Comparison of Compressibility Factors Computed from Individual Pseudo Criticals with Those Computed from Pseudo Critical Gas Gravity Curve

OKLAHOMA CITY GASES

Sample No.	Gas Gravity	Pseudo Critical Conditions Calculated from Analyses pTc	pPc	Read from Curve Fig. 7 pTc	pPc	Compressibility Factors 40° F. 1500 lb. Calc. Pseudo	Fig. 7 Pseudo	140° F. 1500 lb. Calc. Pseudo	Fig. 7 Pseudo
1	1.108	515	646	524	646			0.470	0.443
2	0.769	410	663	414	666	0.550	0.537	0.790	0.781
3	0.700	388	666	392	669	0.643	0.630	0.829	0.824
4	1.150	537	646	537	642			0.400	0.410
5	1.063	495	642	509	650			0.536	0.500
6	0.611	365	672	363	672	0.723	0.730	0.867	0.867
7	0.990	496	666	485	655			0.538	0.574
8	1.023	490	649	496	653			0.564	0.584
9	0.796	423	664	423	670	0.506	0.503	0.757	0.760
10	0.755	406	665	410	666	0.585	0.550	0.776	0.770
11	0.951	466	635	372	657	0.345	0.325	0.636	0.620
12	0.711	399	677	395	669	0.609	0.620	0.814	0.817
13	0.974	485	659	480	656			0.576	0.593
14	0.803	424	664	425	665	0.495	0.488	0.754	0.750
15	0.635	372	672	370	671	0.700	0.707	0.854	0.858
16	0.906	458	659	458	660	0.367	0.370	0.666	0.666
17	0.678	388	672	384	670	0.645	0.661	0.830	0.834
18	0.787	427	671	420	665	0.485	0.510	0.750	0.768
19	0.885	447	656	452	661	0.409	0.389	0.695	0.683
20	0.876	446	659	448	662	0.412	0.405	0.697	0.695
21	0.775	417	666	416	666	0.525	0.542	0.775	0.777
22	0.907	458	657	458	660	0.373	0.373	0.664	0.663
23	0.975	483	660	481	656			0.583	0.586
24	0.749	410	667	508	667	0.568	0.563	0.788	0.790
25	0.799	424	663	423	664	0.500	0.470	0.754	0.754
				Numerical average deviation		2.62%		2.38%	
				Algebraic average deviation		0.83%		+0.90%	

TABLE X

Comparison of Compressibility Factors Computed from Individual Pseudo Criticals with Those Computed from Pseudo Critical Gas Gravity Curve

GRAPELAND GASES

Sample No.	Gas Gravity	Pseudo Critical Conditions Calculated from Analyses pTc	pPc	Read from Curve Fig. 6 pTc	pPc	Compressibility Factors 40° F. 1500 lb. Calc. Pseudo	Fig. 6 Pseudo	140° F. 1500 lb. Calc. Pseudo	Fig. 6 Pseudo
1	0.622	369	672	366	670	0.712	0.720	0.857	0.866
2	0.878	454	661	445	658	0.380	0.402	0.675	0.692
3	0.750	402	664	406	665	0.584	0.570	0.806	0.798
4	0.636	372	672	370	670	0.700	0.710	0.854	0.860
5	0.867	443	661	442	659	0.419	0.421	0.708	0.711
6	0.751	404	663	406	665	0.527	0.563	0.802	0.795
7	0.635	373	671	370	670	0.694	0.710	0.852	0.860
8	0.838	439	663	433	661	0.435	0.443	0.718	0.725
9	0.732	397	663	400	666	0.603	0.586	0.813	0.806
10	0.645	377	661	372	669	0.685	0.696	0.845	0.854
11	0.804	431	667	422	662	0.470	0.489	0.738	0.750
12	0.741	401	663	402	665	0.584	0.575	0.803	0.800
13	0.654	380	670	376	668	0.676	0.685	0.845	0.848
14	0.754	415	670	406	665	0.530	0.564	0.778	0.793
15	0.748	404	664	405	665	0.573	0.575	0.802	0.797
16	0.742	412	671	402	665	0.559	0.569	0.787	0.804
17	0.744	402	664	403	665	0.588	0.576	0.804	0.800
				Numerical average deviation		2.11%		1.05%	
				Algebraic average deviation		±1.24%		+0.57%	

TABLE XI

Comparison of Compressibility Factors from Individually Computed Pseudo Criticals with Those from Curves vs. Gas Gravity Comparison at 1500 pounds per sq. in.

No. Considered	Gases	Temp. °F.	% Algebraic average error	% Numerical average error
18	Oklahoma City	40	—0.83	2.63
6	Oklahoma City, less than 0.75 gravity	40	+0.55	1.51
25	Oklahoma City	140	+0.90	2.38
6	Oklahoma City, less than 0.75 gravity	140	+0.16	0.36
17	Grapeland	40	+1.24	2.11
11	Grapeland, less than 0.75 grav.	40	+0.58	1.92
17	Grapeland	140	+0.57	1.05
11	Grapeland, less than 0.75 grav.	140	+0.27	0.88
139	Miscellaneous gases	40	—0.66	3.94
150	Miscellaneous gases	140	—0.12	1.82
77	Misc. gases, less than 0.75 gr.	40	+0.02	1.62
77	Misc. gases, less than 0.75 gr.	140	—0.10	0.62

sure absorber residues group together at the lowest gravity. The next higher gravity points below the curve are the computed plant intake including condensate. The reabsorber residues form a third series of points at high gravity and above the line. Both the Oklahoma City and Grapeland gases follow the same curves, although they are shown on separate figures.

To evaluate the effect of the small deviations of pseudo critical temperatures and pressures from a smooth curve against gas gravity, comparisons of compressibility factors were determined with the pseudo criticals from the smooth curve and from those given by the gas analyses. Since the greatest errors are likely due to temperature effects, two conditions were selected for these calculations; 40° F. and 1500 pounds and 140° F. and 1500 pounds. The compressibility factors for these two conditions by the two methods are included in Tables IX and X.

The errors are retabulated on Table XI, including the averages for all gases having gravities under 0.750. The condition of 40° F. and 1500 pounds is about the worst condition which could be encountered. Although the average error is 2.11% for the Grapeland gases, the maximum deviation in temperatures is 7° F. This demonstrates the fact that compressibility factor changes with temperature are more rapid than the proportional absolute temperature change. Inspection of the Grapeland gases on Fig. 6 shows that one curve for the residues and one curve for the plant intakes would have reproduced the pseudo criticals almost perfectly.

Pseudo Criticals as a Function of Gas Gravity For 150 Natural Gases

One hundred and fifty gas analyses were collected from miscellaneous sources including the above. The pseudo critical temperatures and pressures and gas gravities were computed with data similar to Tables IX and X. Fig. 5 is a plot of the pseudo critical temperatures and pressures as a function of gas gravity. The only distinction made among the points is the identification of gases containing nitrogen or carbon dioxide in reported quantities since these gases would not necessarily follow a general curve for hydrocarbon gases. Considerable scattering of the points occurs especially at higher gas gravities.

In order to evaluate the effect of this scattering of points on the compressibility factors, comparisons similar to those of Tables IX and X were made with the results shown in Table XI. The 3.94% average error for the 40° F. compressibility factors probably includes several gases of high gravity in the two-phase region. The average error of 1.8% for the 140° F. factors is relatively low for this general relationship.

Meter Factor Charts

Meter factors which correct gas volumes for deviation of gases from ideal may be computed as a function of temperature, pressure and gas gravity provided the pseudo critical temperature and pressure are a function of gas gravity. The deviation factor alone is the square root of the reciprocal of the compressibility factor and may be computed as shown in Table XII. The deviation factor may be combined with the temperature and gravity factor as previously described.

Fig. 8 is a plot of the deviation-temperature factor, F_{TZ}, for Oklahoma City and Grapeland gases since they have the same function of pseudo critical conditions with

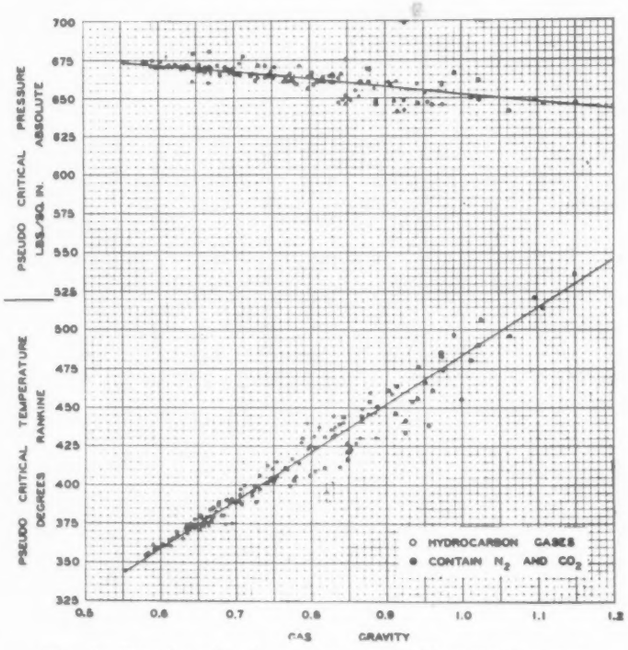


Fig. 5—Pseudo critical properties of 150 natural gases

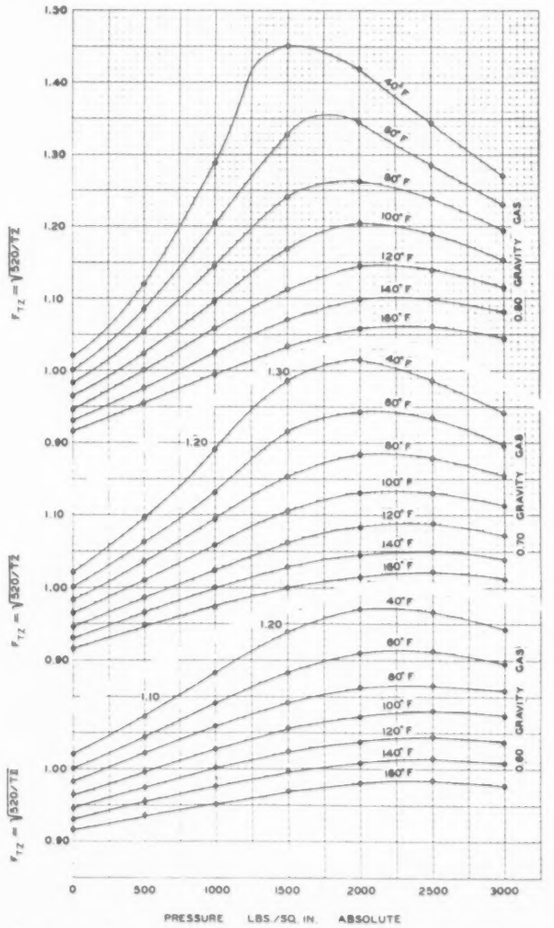
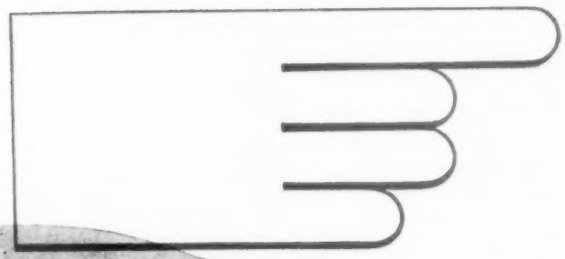


Fig. 8—Meter factors for Grapeland and Oklahoma City gases



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gas gravity. It is necessary to make individual charts for each gas gravity and interpolate between these charts for intermediate gravities. Tables could be set up to give the usual correction factors for any series of gases.

Since the gas gravity must be known to find the meter factor, it is just as convenient to include the gravity factor with the temperature and deviation. Fig. 9 gives the three types of meter factors for the Oklahoma City and Grapeland gases. There seems to be little advantage of one over the other from the type of curves involved. Also, it may be shown that ease of interpolation between gas gravities shifts from one type of chart to another depending upon the specific conditions.

Fig. 10 is a plot of the F_{GTZ} factors corresponding to the gas gravity-pseudo critical property curves of Fig. 5 for miscellaneous gases. The sensitivity of the meter factor at low temperature at pressures from 1000 to 2000 pounds is observed again. Also some of the gases of high gravity may be in the two-phase region over part of the range represented.

The errors given for the compressibility factors by Tables IX, X and XI should not be construed as the errors in the meter factors. Since the square root of the deviation enters the meter formula, the error in the meter factors are about one half of those shown. Thus the average errors at 40° F. and 1500 pounds for the Grapeland and Oklahoma City gases due to use of the pseudo critical-gravity curve are 1.1% and 1.3% respectively of the meter factor. The maximum error in meter factor for any of these two groups of gases is 3%. For the 139 gases at 40° F. and 1500 pounds, the average error in the meter factor becomes 2% due to assuming all gases follow the pseudo critical-gas gravity relationship while the maximum error may become as large as 10%.

The total error in gas measurement due to density calculations includes the uncertainties in the compressibility factor plot and may increase the above values by one per cent on the average. It is impossible to make definite

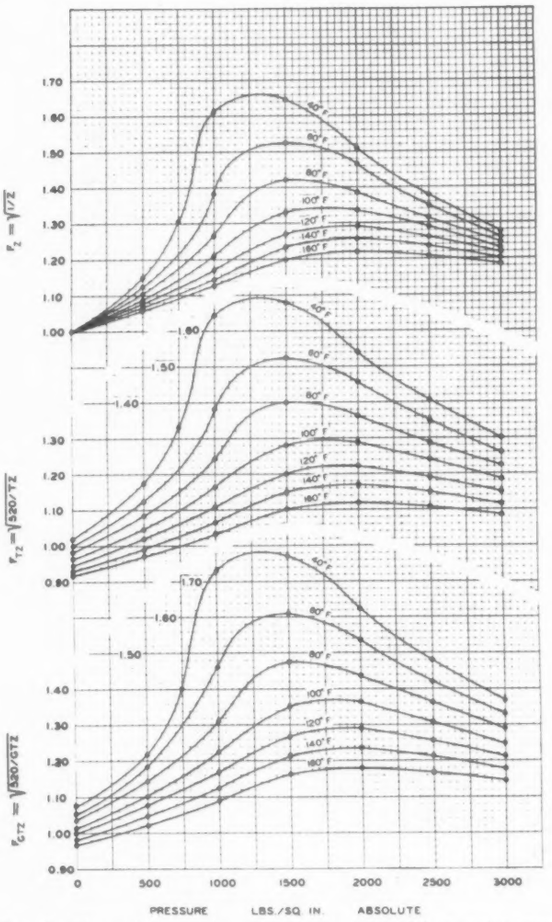

Fig. 9—Three types of meter factors for 0.9 gravity gases

TABLE XII

Typical Calculation of Meter Factors—Grapeland and Oklahoma City Gases

Gas gravity = 0.600. pTc = 359. pPc = 672.

Temp. F.	Pressure, Lb. per sq. in. abs.	pTR	pPr	Z	$\frac{1}{Z}$	$\sqrt{\frac{1}{Z}}$	$\sqrt{\frac{520}{T\,Z}}$	$\sqrt{\frac{520}{GTZ}}$
40	500	1.392	0.744	0.902	1.109	1.052	1.072	1.388
	1000		1.488	0.812	1.231	1.110	1.132	1.463
	1500		2.232	0.738	1.356	1.163	1.188	1.531
	2000		2.976	0.700	1.430	1.196	1.220	1.572
	2500		3.720	0.703	1.422	1.192	1.215	1.570
	3000		4.464	0.729	1.371	1.170	1.192	1.540
60	500	1.450	0.744	0.916	1.091	1.044	1.044	1.350
	1000		1.488	0.840	1.190	1.090	1.090	1.409
	1500		2.232	0.781	1.280	1.131	1.131	1.401
	2000		2.976	0.744	1.345	1.160	1.160	1.499
	2500		3.720	0.740	1.352	1.162	1.162	1.500
	3000		4.464	0.761	1.312	1.145	1.145	1.480
80	500	1.504	0.744	0.925	1.081	1.040	1.021	1.318
	1000		1.488	0.861	1.160	1.078	1.059	1.365
	1500		2.232	0.811	1.232	1.110	1.091	1.406
	2000		2.976	0.779	1.284	1.132	1.112	1.433
	2500		3.720	0.774	1.292	1.137	1.115	1.440
	3000		4.464	0.790	1.268	1.128	1.108	1.430
100	500	1.560	0.744	0.936	1.069	1.034	0.995	1.280
	1000		1.488	0.880	1.136	1.066	1.027	1.318
	1500		2.232	0.835	1.199	1.095	1.056	1.355
	2000		2.976	0.808	1.238	1.112	1.072	1.375
	2500		3.720	0.797	1.254	1.120	1.080	1.393
	3000		4.464	0.813	1.230	1.110	1.070	1.380
120	500	1.618	0.744	0.946	1.058	1.029	0.974	1.255
	1000		1.488	0.895	1.119	1.058	1.001	1.290
	1500		2.232	0.857	1.168	1.051	1.023	1.324
	2000		2.976	0.834	1.200	1.095	1.036	1.338
	2500		3.720	0.822	1.218	1.104	1.045	1.352
	3000		4.464	0.835	1.198	1.094	1.036	1.337
140	500	1.671	0.744	0.951	1.051	1.024	0.954	1.231
	1000		1.488	0.909	1.100	1.049	0.975	1.260
	1500		2.232	0.872	1.146	1.072	0.998	1.29
	2000		2.976	0.853	1.171	1.081	1.007	1.300
	2500		3.720	0.842	1.188	1.090	1.014	1.305
	3000		4.464	0.855	1.170	1.081	1.007	1.300
160	500	1.727	0.744	0.959	1.042	1.020	0.934	1.208
	1000		1.488	0.921	1.075	1.038	0.950	1.228
	1500		2.232	0.892	1.120	1.059	0.969	1.251
	2000		2.976	0.871	1.149	1.072	0.980	1.270
	2500		3.720	0.865	1.156	1.075	0.984	1.271
	3000		4.464	0.875	1.142	1.069	0.976	1.263

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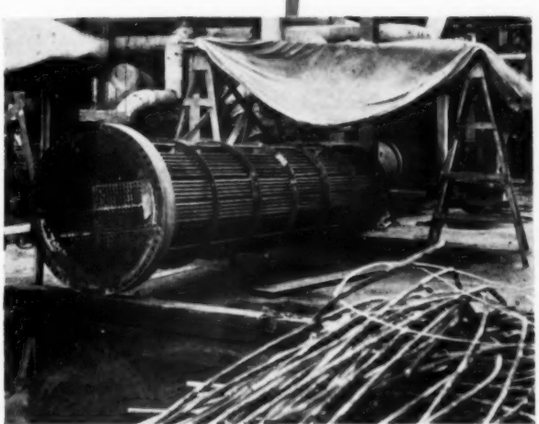

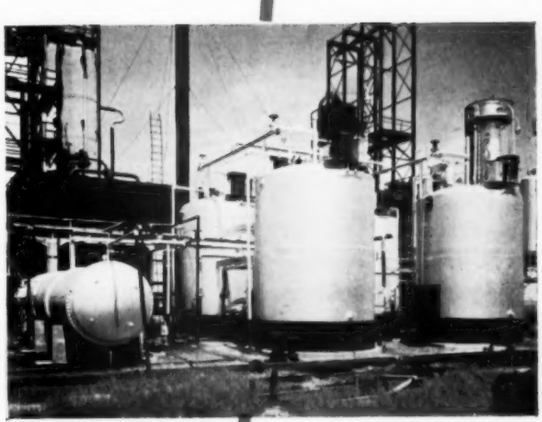

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statements on probable accuracy without describing the T_R and P_R etc. under consideration.

Gasoline Content as an Added Variable

As stated earlier, the gasoline content would be expected to help characterize the pseudo critical conditions of gases but was found to be little added help to gas gravity when applied to miscellaneous gases. Also, if it were to be used for specific gases, it would be necessary to make a meter correction factor for each gas.

If a series of relatively similar gases such as condensate well effluents were studied by themselves, it is quite possible that a liquid content would characterize the gases so that any deviations from a pseudo critical temperature-gas gravity curve could be measured by this variable. In that case, the gasoline content would not be used for individual gases but to establish the pseudo critical-gas gravity curves.

Metering of Gases Containing Condensed Liquids

Orifice meters are not generally considered as satisfactory for measuring a mixture of two phases. However, condensate well effluents are normally in two phases and most rich high pressure gases form a liquid phase during pressure decreases occurring with flow. The previous discussion of metering assumed single phase flow but the need for a meter to handle two phases is increasing.

Many operators separate the liquid from the gas phase just prior to metering to eliminate the difficulty of handling gas containing liquid. In some cases the liquid is dumped back into the gas line below the meter, thus avoiding liquid accumulation at the orifice plate.

Until recently the prospect of metering mixtures of liquids and gases did not appear to be very great. However, two facts are now available which increase the possibility of two-phase metering. First, it is possible to make the stream homogeneous to the extent that it can be properly sampled (16) (17). Second, the density of the flowing stream can be computed regardless of whether a single phase exists or whether a small quantity of liquid is present.

Operators report satisfactory mechanical operation of meters if the velocities are high enough to give adequate dispersion of the liquid to simulate an homogeneous fluid. The recent tests of sampling two-phase flow should increase the knowledge of the homogeneity of the two-phase streams. If the mechanical devices can be assured to give the correct differential across the orifice, small amounts of liquid at high pressure are not likely to invalidate the usual density calculations.

When metering high pressure gases containing a liquid phase, special precautions must be observed when obtaining the gas gravity. Satisfactory sampling of the flowing stream followed by separation of the liquid and gas at a lower pressure, below 500 pounds, should provide data for computing the flow stream molecular weight. A gravity balance test could be devised to operate on the atmospheric pressure gas with corrections for liquid recovered in a specially designed receiver.

Recommended Procedure for Establishing Meter Factors

The following procedures for establishing standard meter factors including the deviation from ideal gases are as follows, depending upon the accuracy desired:

(1) For the highest degree of accuracy, a gas analysis should be obtained to eliminate any doubt as to

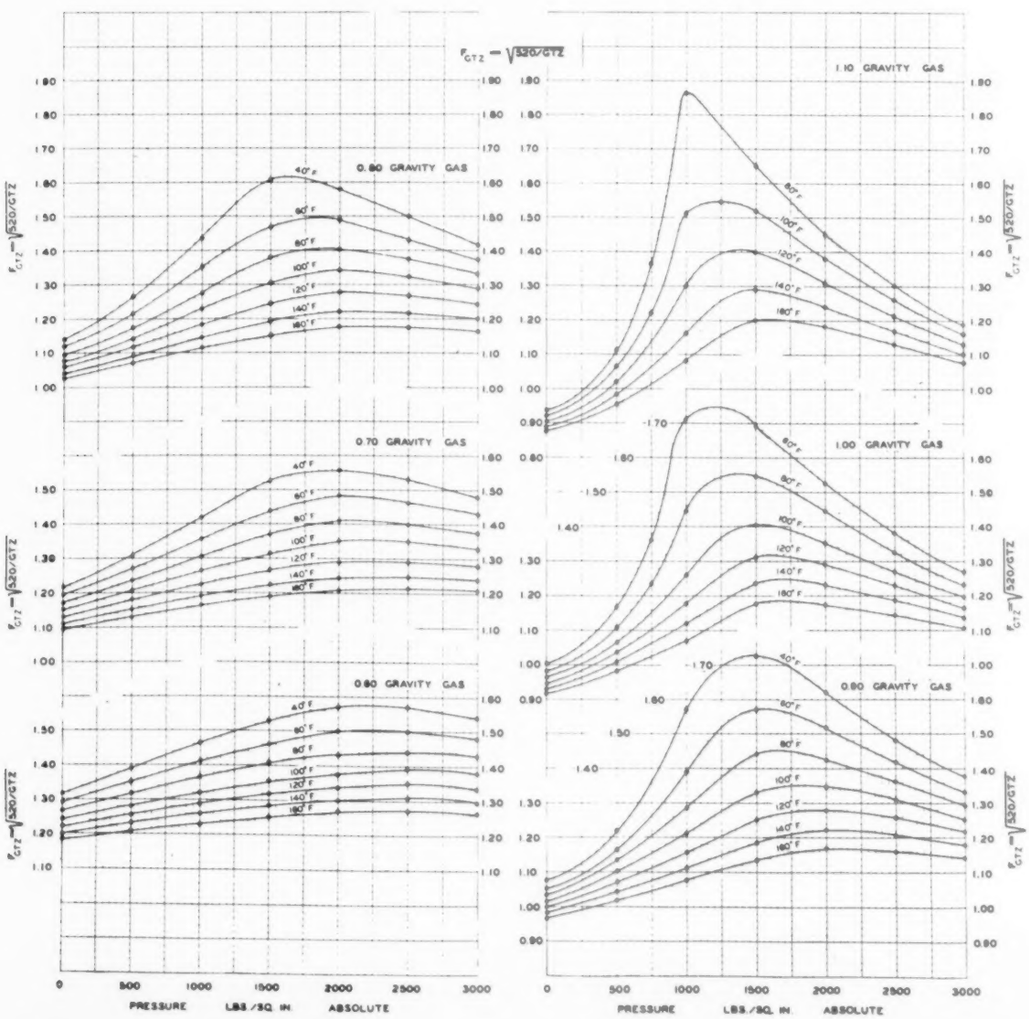

Fig. 10—Gravity-temperature deviation meter factors for average natural gases

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pseudo criticals. The errors in metering due to gas density alone should not exceed 1% on the average.

(2) For average metering of high pressure gases of varying gravity, representative analyses should be obtained to be used to establish a curve of gas gravity vs. pseudo critical temperature and pressure. From this curve, a chart or series of tables should be prepared giving the meter factors at even gas gravities. The errors in metering due to gas density alone should not exceed 2% on the average.

(3) For cases in which analyses are not available, the meter correction factors of Fig. 10 are recommended. The error in metering due to gas density should not exceed 3% for the average gas, but an unusual gas at conditions to give low compressibility factors might be in error by as much as 10%.

(4) Further study of gasoline contents may indicate their usefulness for certain groups of gases in establishing the correct pseudo critical conditions vs. gas gravity.

(5) Metering of gases above 1000 pounds known to contain less than 10% of liquid by volume should be computed as if the entire stream were a gas phase provided the meter operation is indicative of uniform dispersion of the liquid in the gas passing through the meter run.

(6) The compressibility factor plot, Fig. 1, should be used for natural gases containing less than 7.5% N_2 and 2% carbon dioxide. For appreciably higher concentrations, the measurement of the compressibility factors is recommended for reliable results.

(7) The double importance of temperature because of its effect on compressibility factors as well as on the ideal volumetric expansion should be recognized in high pressure measurement.

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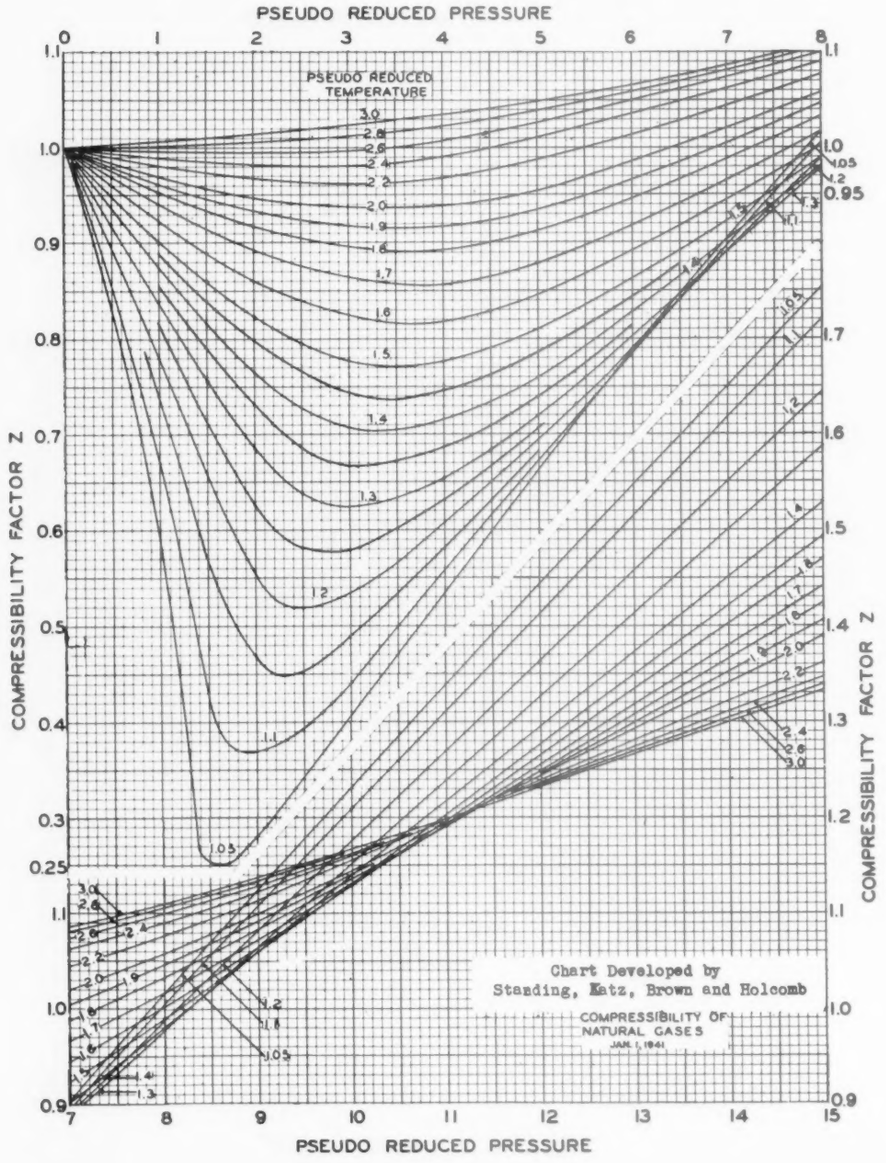

Fig. 1—Compressibility factor chart for natural gases. (Note that Fig. 1 is the last referred to in this article)

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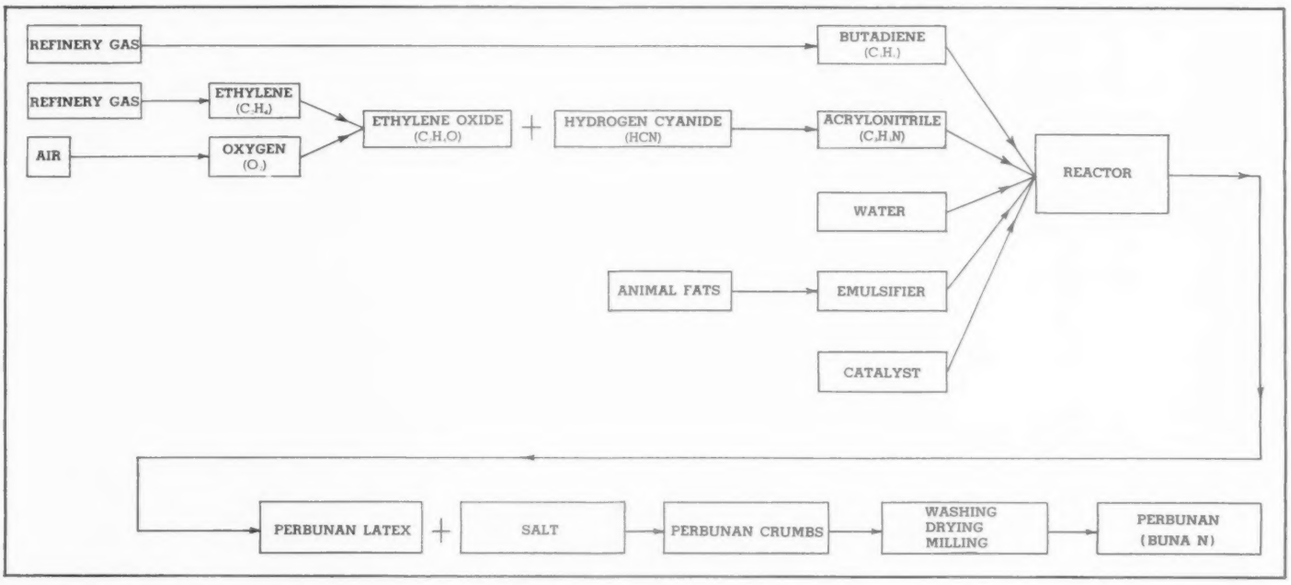
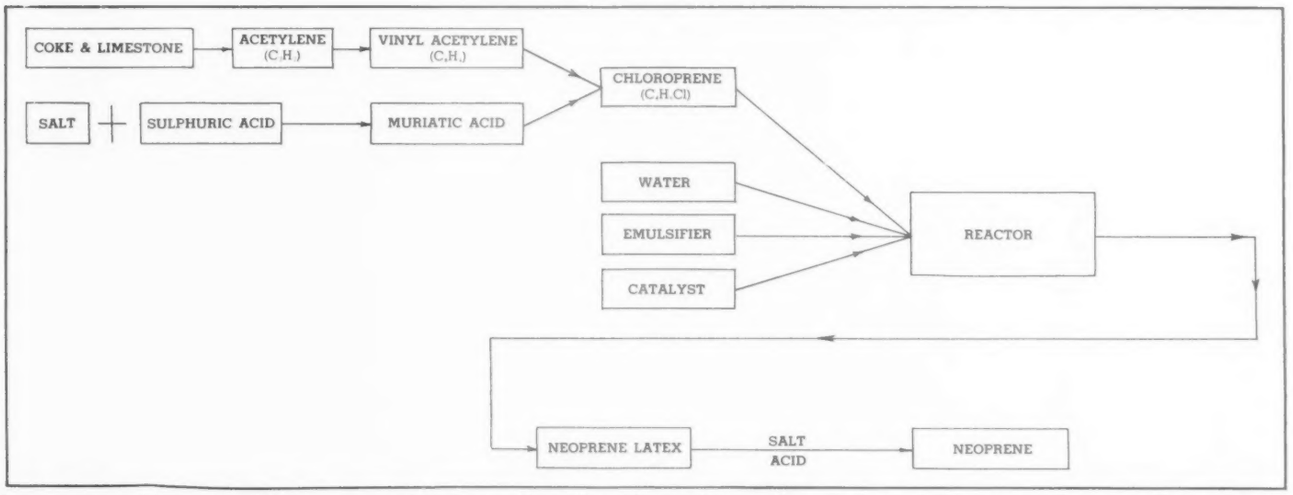
Rubber-From-Petroleum Chart

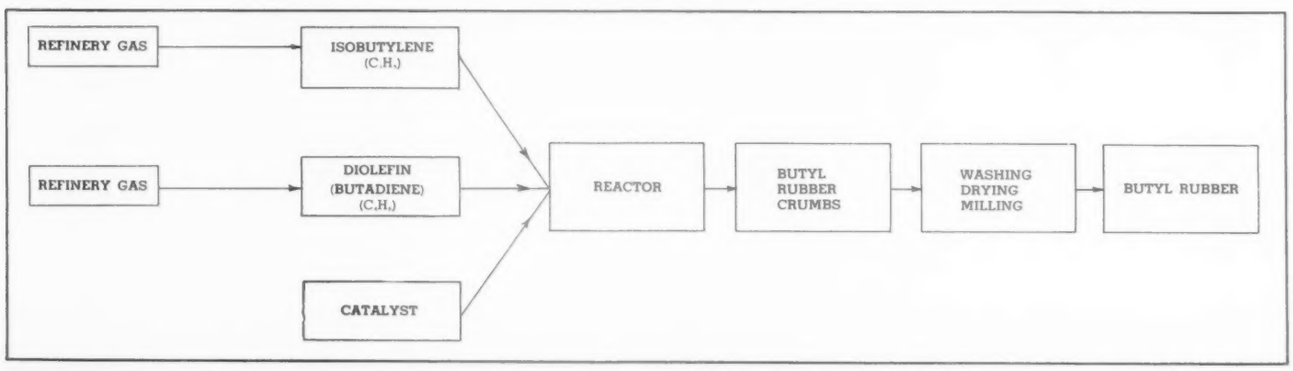
Below are shown in simplified graph form the steps in the preparation of vulcanizable synthetic rubber from natural gas and refinery gases, and also from non-petroleum sources, principally farm products converted first into alcohol and then into butadiene. The ethyl alcohol can also be recovered from petroleum, at less cost than from potatoes or grain or other farm produce, authorities state. Charts prepared by Standard Oil Co. (N. J.)



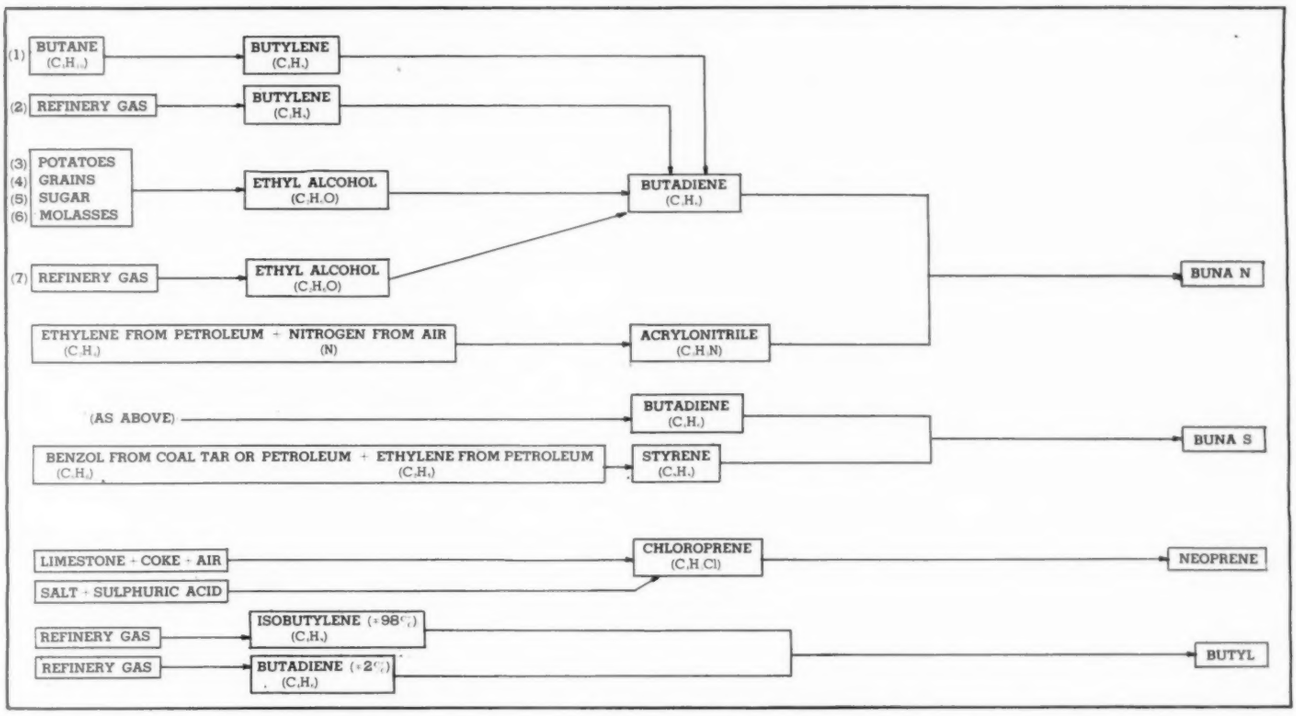
Buna N (N for nitrile) or Perbunan type: 25% acrylonitrile polymerized with 75% butadiene. This type now made in larger commercial volume than Buna S, principally for rubber goods. Has most of the properties of natural rubber and is superior in resistance to heat, aging, swelling in oil and gasoline



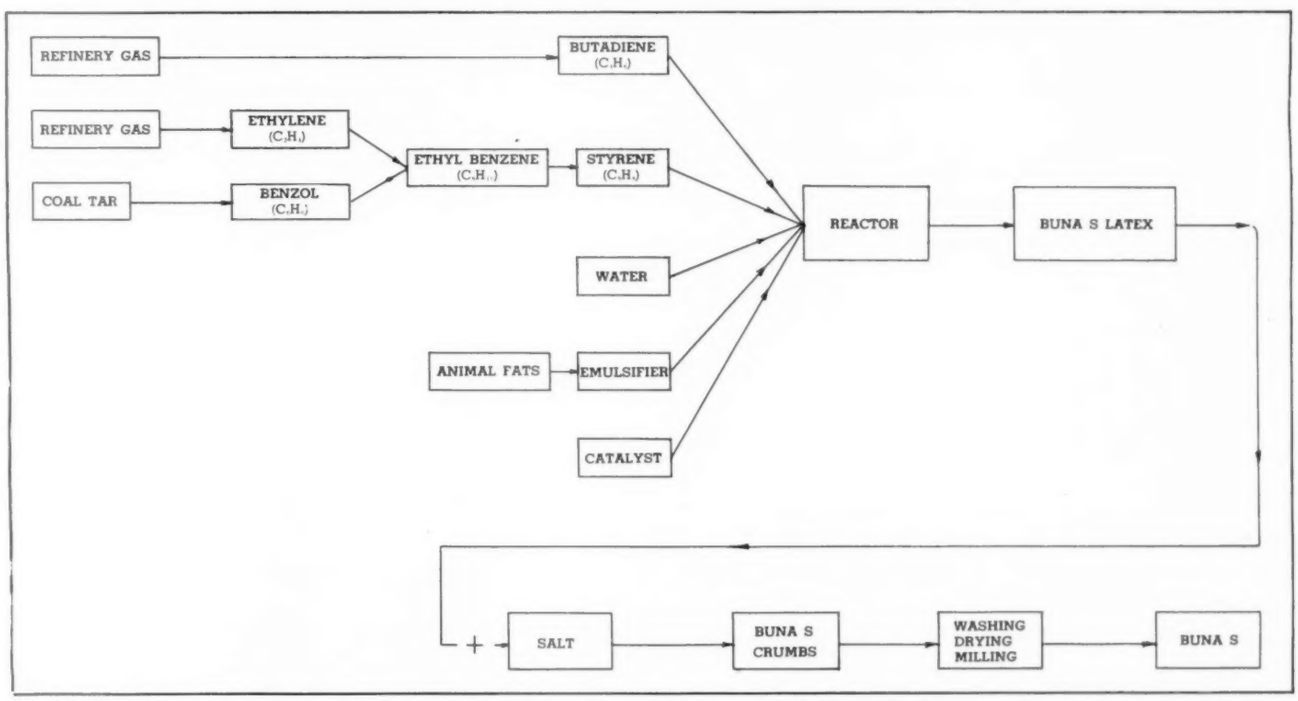
Neoprene, or chloroprene rubber, recovered from acetylene through and intermediate product, vinyl acetone. Possesses the same general physical properties as natural rubber and resists heat, sunlight, petroleum products and aging. Used chiefly for its oil and solvent-resisting properties



Butyl type synthetic rubber, made wholly from petroleum. Processes for converting it said to be more simple and direct than in the Buna types. It is not oil resistant



Steps in the manufacture of the two Buna type rubbers and Butyl rubber, from a petroleum or other base, and Neoprene, which is recoverable from chloroprene, also a hydrocarbon but made from acetylene



Buna S (S for styrene) synthetic rubber, made by polymerizing butadiene (75%) and Styrene (25%). Butadiene is secured principally by catalytic dehydrogenation of butane, a constituent of natural and refinery gases. Styrene can be secured from ethylene, another constituent of these gases, but is principally manufactured by chemical companies. Tires are preferably made from Buna S because it is easier to work and cost is lower than from Buna N

Stretchability of Natural and Synthetic Rubbers

Tensile strength is considered an indication of the type of cure and other desirable properties of rubbers. The following table gives maximum tensile strength in pounds per square inch, and corresponding elongation, in percent at room temperature, for natural and synthetic rubbers.

(Table from "Natural and Synthetic Rubbers", Edgar Marburg lecture for 1941 of the American Society for Testing Materials, by Harry L. Fisher, director of organic research, U. S. Industrial Chemical, Inc., and Air Reduction Co.)

Compound	Unvulcanized Tensile Strength psi	Unvulcanized Elongation (%)	Vulcanized Pure-Gum Compound Tensile Strength psi	Vulcanized Pure-Gum Compound Elongation (%)	Vulcanized Carbon Black Compound Tensile Strength psi	Vulcanized Carbon Black Compound Elongation (%)
Natural Rubber	355	1200	4125	710	5000	650
Buna 85	....	....	....	....	2490	600
Buna 115	....	....	....	....	2845	700
Buna S	....	....	....	....	4200	650
Perbunan	....	....	2130	900	5000	600
Chemigum	....	....	....	....	4425	630
Hycar OR	....	....	....	....	3500	450
Methyl rubber W	....	....	425	510	2415	530
Neoprene	425	1100	4265	820	4125	760
Thiokol A	....	....	....	....	855	370
Thiokol D	100	570	500	750	1705	610
Vistanex MM	285	1000	nonvulcanizable		nonvulcanizable	
Vistanex HM	855	1000	nonvulcanizable		nonvulcanizable	
Koroseal, no plasticizer	5690	2	nonvulcanizable		nonvulcanizable	
Koroseal, 30 per cent plasticizer	3840	170	nonvulcanizable		nonvulcanizable	
Koroseal, 60 per cent plasticizer	995	500	nonvulcanizable		nonvulcanizable	

Midgley Says Rubber Shortage Is Due To "Slothfulness" of Technologists

The dilemma in which this nation finds itself because of the rubber shortage must be laid to rubber technologists who have failed to develop practical methods of separating this material from plants growing plentifully here, Dr. Thomas Midgley, Jr., vice-president of Ethyl Gasoline Corp., stated at a meeting of the Chicago section of the American Chemical Society May 22, when he received the Willard Gibbs medal, one of the highest honors in American science. He was cited for his discovery of tetraethyl lead as an anti-knock agent in motor fuels, for his contributions to synthetic rubber research, and for his development of safe refrigerants and other scientific developments.

More rubber can probably be grown within the U. S. than could possibly be consumed, he stated, but rubber production has been confined to the tropics because of the ease with which it can be obtained from the hevea tree by cheap labor.

Separation of rubber from the hevea tree, Dr. Midgley stated, is still incomplete and he said that much of the confusion that exists in rubber chemistry is due to the failure to differentiate between the sol rubber and gel rubber, which with resin and a sulphur-free protein make up the four principal components of the purest natural rubber. As yet, he said, technologists do not even have pure sol or pure gel rubbers to work with.

"Sol and gel rubbers seem to be chemical identities so far as can be determined by chemical analysis, but the difference in physical properties contradicts such a conclusion," he explained. "Sol rubber disperses (dissolves) completely in benzene and similar solvents, gel rubber merely swells; sol rubber vulcanizes to a useful product, gel rubber to a leathery inelastic product that is quite useless.

"Gel rubber, however, 'breaks down' by mastication (milling) in air to give a material quite like sol rubber and which, when vulcanized, yields a product in all known respects the same as that obtained from sol rubber. To fail to differentiate between these two forms of rubber is certain to lead to confusion."

Dr. Midgley posed 7 questions dealing with the fundamental aspects of rubber which he said cannot now be answered although scientists and technologists have been studying rubber for more than 100 years. Three of his "unanswerable" questions were described as being of technical interest:

What happens when rubber is "broken-down", that is, masticated by kneading in air?

What happens in vulcanization?

Why does rubber retract or shrink after being stretched?

His 4 other questions, it was pointed out, are primarily of scientific interest but the answers, if found, may have important bearing on the technology of rubber:

Are all molecules of sol rubber occurring in nature of the same size or is sol rubber a mixture of molecules of different sizes?

If the molecules are all of the same size, what is their molecular weight?

What is the structural formula of rubber, that is, how are the atoms assembled that make up its molecules?

If rubber molecules are open chains of atoms, what are the groups of atoms at their ends?

He discussed varying theories which have been brought forward to answer these questions, particularly two explanations of why rubber retracts.

Bibliography on Synthetic Rubber

A 10-page mimeographed bibliography on synthetic rubber has been prepared by Bradford A. Osborne, head of the Technical Department of the Tulsa Public Library. The articles, which are chiefly from current literature, are classified by subjects. Readers can secure copies on request to Mr. Osborne.

New Patents

Compiled by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh Street, NW, Washington, D. C., from whom copies may be obtained at rate of 25c each. State number of patent and name of inventor when ordering.

Desulphurizing and cracking process—Benjamin T. Brooks, Old Greenwich, Mass., assignor to Standard Alcohol Co. Filed Dec. 29, 1938. No. 2,282,451.

Catalytic reaction process—Donald L. Campbell, Elizabeth, N. J., assignor to Standard Oil Development Co. Filed Oct. 12, 1938. No. 2,282,453.

Catalytic alkylation process—Hans G. Vesterdal, Elizabeth, N. J., assignor to Standard Oil Development Co. Filed July 27, 1940. No. 2,282,505

Production of color stabilized petroleum oils—Herbert G. M. Fischer, Westfield, N. J., and William James, Palembang, Sumatra, Dutch East Indies, assignors of three-fourths to Standard Oil Development Co. and one-fourth to Socony-Vacuum Oil Co. Filed July 26, 1939. No. 2,282,514.

Polymerization of hydrocarbon gases—Frederick W. Sullivan, Jr., and Robert F. Ruthruff, Hammond, Ind., assignors to Standard Oil Co. (Ind.) Filed Nov. 25, 1931. No. 2,282,549.

Sweetening petroleum products—Donald R. Stevens, Swissvale, and Joseph E. Nickels, Pittsburgh, assignors to Gulf Research & Development Co. Filed Mar. 2, 1939. No. 2,282,594.

Process for conversion of hydrocarbons—Harry E. Drennan, Whittenburg, Tex., assignor to Phillips Petroleum Co. Filed Mar. 15, 1938. No. 2,282,602.

Catalytic conversion of hydrocarbon oils—Gustav Egloff, Chicago, assignor to Universal Oil Products Co. Filed June 29, 1940. No. 2,282,855.

Conversion of hydrocarbons—Jacob E. Ahlberg and Charles L. Thomas, Chicago, assignors to Universal Oil Products Co. Filed Mar. 20, 1937. No. 2,282,922.

Isomerization of normal butane—Vladimir N. Ipatieff and Herman Pines, Chicago, Ill., assignors to Universal Oil Products Co. Filed Sept. 30, 1936, and Apr. 18, 1940. Nos. 2,283,142 and 2,283,143.

Production of ethers from alcohols—Per K. Frolich, Westfield, N. J., assignor to Standard Oil Development Co. Filed May 11, 1938. No. 2,282,469.

Depolymerization of high boiling unsaturated hydrocarbons—Karl Smeykal and Kurt Reisinger, Germany, assignors to William E. Currie, New York, N. Y. Filed Sept. 1, 1938. No. 2,282,499.

Zeolites and their treatment, and synthetic contact masses and their preparation—John R. Bates, Swarthmore, Pa., assignor to Houdry Process Corp. Filed Oct. 23 and Nov. 17, 1937. Nos. 2,283,172 and 2,283,173.

Method of preparing composite materials for contacting operations—John R. Bates, Swarthmore, Pa., and George R. Bond, Jr., Paulsboro, N. J., assignors to Houdry Process Corp. Filed Apr. 26, 1939. No. 2,283,174.

Catalytic converter—Eugene J. Houdry, Ardmore, and Thomas B. Prickett, Philadelphia, assignors to Houdry Process Corp. Filed Mar. 14, 1939. No. 2,283,208.

Hydrocarbon gas conversion process — Malcolm P. Youker, Bartlesville, Okla., assignor to Phillips Petroleum Co. Filed Apr 1931. No. 2,283,305.

Treatment of phenols—Raymond E. Schaad, Chicago, assignor to Universal Oil Products Co. Filed Feb. 16, 1939. No. 2,283,465.

Catalytic process—Karl H. Hachmuth, Bartlesville, Okla., assignor to Phillips Petroleum Co. Filed Nov. 7, 1939. No. 2,283,499.

Manufacture of motor fuel—Arthur R. Goldsby and Frank H. Bruner, Beacon, N. Y., assignor to The Texas Co. Filed Mar. 18, 1938. No. 2,283,603.

Hydrocarbon conversion process—Roland B. Day and Elmer R. Kanhofer, Chicago, assignors to Universal Oil Products Co. Filed Mar. 31, 1941. No. 2,283,851.

Production of isoparaffins—Gustav Egloff, Chicago, assignor to Universal Oil Products Co. Filed July 5, 1940. No. 2,283,852.

Conversion of hydrocarbon oils—Bernard S. Friedman and Wayne L. Benedict, Chicago, assignors to Universal Oil Products Co. Filed July 5, 1940. No. 2,283,854.

Polymerizing butadiene hydrocarbons—Heinz Wollthan and Wilhelm Becker, Germany, assignors to Jasco, Inc. Filed Mar. 13, 1941. No. 2,281,613.

Method for treating oils—Ulric B. Bray, Palos Verdes Estates, Calif., assignor to Union Oil Co. (Calif.) Filed July 22, 1933. No. 2,281,667.

Cracking of hydrocarbon oils—Percival C. Keith, Jr., Peapack, N. J., and Joseph K. Roberts, Flossmoor, Ill., assignors of one-half to Standard Oil Co. (Ind.) and one-half to Gasoline Products Co. Filed Feb. 11, 1937. No. 2,281,881.

Solvent treating process—James M. Whiteley, Jr., Westfield, N. J., assignor to Standard Oil Development Co. Filed Jan. 11, 1939. No. 2,281,897.

Adiabatic fractionating column—Gale L. Adams, San Marino, Calif., assignor to Socony-Vacuum Oil Co. Filed Mar. 11, 1941. No. 2,281,906.

Separation of isobutylene from hydrocarbon mixtures—Lewis A. Bannon and Helmuth G. Schneider, Roselle, N. J., assignors to Standard Oil Development Co. Filed Nov. 19, 1938. No. 2,281,911.

Cracking oil using synthetic catalytic compositions—Gerald C. Connolly, Baton Rouge, La., assignor to Standard Oil Development Co. Filed Dec. 6, 1938. No. 2,281,919.

Executing reactions with aid of fugitive catalysts—Martin de Simo, Piedmont, and Frank M. McMillan, Berkeley, Calif., assignors to Shell Development Co. Filed Jan. 15, 1940. No. 2,281,924.

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Hortonspheres are now widely used for petroleum products requiring pressures of from 25 to 100 lbs. per sq. in. to prevent evaporation loss. A closed container is essential, of course, because gas pressure can build up only in a vapor-tight vessel. Thus, the fact that pressure does exist in spheres proves that no vapor loss is occurring. In other words, no loss can be experienced as long as venting does not take place.

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New Process for Catalytic Conversion of Normal into Iso-Butane

Further means for increasing the supply of high-octane aviation gasoline from the C_4 hydrocarbons in natural and refinery gases is said to be embodied in the process recently announced by Universal Oil Products Co. for the isomerization of normal butane into iso-butane. Yields from butane are said to be 60 to 65% of the more desirable iso-butane for further processing as a source of gasoline.

To operators of alkyiation processes particularly, possibilities for increasing the proportion of iso-butane, the paraffin constituent in the alkylation reaction, that can be recovered from the butane fractions in gases are important. For other processes are now coming into commercial use which make possible the use of other low boiling hydrocarbons than butylene, principally propylene, as the olefin in the reaction. The volume of propylene that can be recovered from natural and refinery gases is about twice that of butylene. The commercial application of the above or other means for increasing the supply of both constituents of the alkylation process indicates that the volume of alkylate for 100-octane aviation gasoline can be greatly enlarged from the same volume of crude processed by refineries and the same volume of gas put through natural gasoline plants.

Three plants are said to be now building, and more contracted for, to operate on the isomerization process of the Universal Oil Products Co., which uses special metallic type catalysts, and hydrogen halides as a promoting agent for the catalytic reaction, operating at elevated temperatures and pressures. The Universal's patent, No. 2,283,142, issued May 12, 1942, covers a method developed by Dr. Vladimir Ipatieff and Herman Pines, the application being filed in 1936.

Among the catalysts which have been used are aluminum chloride, zinc chloride, iron chloride, zirconium chloride, stannic chloride and boron fluoride.

The patent claims that experiments have indicated that best results are obtained when a small proportion of a hydrogen halide is also present in the reaction. A supplementary patent, No. 2,283,143, comprises in detail the treatment of normal butane for isomerization into iso-butane where aluminum chloride and hydrogen chloride are used as catalysts. As a rule, approximately 10% by weight of aluminum chloride and a minor amount of hydrogen chloride of the order of 1-2% by weight of the reactants are used, it is stated in the claims of the supplementary patent. The patent claims indicate the structure and principal physical characteristics of the two butane compounds as shown in the accompanying table.

The description of the isomerization of normal butane into iso-butane in the principal patent (No. 2,283,142), is given as follows:

Structure and Principal Physical Characteristics of Normal Butane and Iso-butane

Name	Structure	B. P.	Critical temperature	Critical pressure
		°C.	°C.	Atmospheres
n-Butane	$CH_3CH_2CH_2CH_3$	+ 0.5	151	36
i-Butane	$CH_3>CH-CH_3$ (with CH_3)	—10.5	134.5	37

"The butanes at the present time bear a further important relationship to oil refining in that their excess production is being utilized as a source of gasoline either by ordinary thermal cracking or by special catalytic dehydrogenation processes followed by polymerization in which catalysts may or may not be used. Investigations have shown that iso-butane is considerably more amenable to cracking and dehydrogenation, both with and without catalysts, than the normal compound. Considering the corresponding mono-olefins, the normal butenes are considerably more difficult to polymerize, either thermally or catalytically, than iso-butene, and it is found also that the octenes representing the dimers of the isobutene are of higher antiknock value than those from n-butenes which holds also for the octanes produced by hydrogenation. It is, therefore, of considerable importance at the present time to convert as much as possible of the normal butane production into iso-butane, and the present invention is especially concerned with a process for accomplishing this object.

"In one specific embodiment the present invention comprises the treatment of normal butane for the isomerization thereof into iso-butane with catalysts comprising essentially metallic halides at elevated temperatures and superatmospheric pressures.

"In a preferred embodiment the catalysts comprise essentially heavy metal chlorides and hydrogen halides.

"We have determined that by the use of the class of catalysts mentioned, and particularly by the convenient use of considerable superatmospheric pressure normal butane may be converted into iso-butane with a yield of as high as 60% to 65%. Evidently the use of super atmospheric pressures of the order of 10 to 50 atmospheres at temperatures of 150° C. and higher, besides depressing the volatilization of granular catalysts tends also to depress numerous undesirable side reactions which would result in the formation of hydrogen and low molecular weight hydrocarbons, so that the reaction proceeds more or less in one direction until an equilibrium is established.

"There are several alternative catalysts which may be employed in accomplishing the present isomerization reaction and, while they may be used more or less interchangeably, some are more effective than others and it is not intended to infer that they are equivalent. Among the compounds which may be employed may be mentioned aluminum chloride, zinc chloride, iron chloride, zirconium chloride, stannic chloride and boron fluoride. Experiments have indicated that best results are obtained when a minor percentage of a hydrogen halide is present in the reactions along with these compounds. Some of the compounds may be employed either in the dry state or in aqueous solution with suitable modifications of operating conditions. In the case of such compounds as aluminum chloride, which readily sublimes, stannic chloride, which boils at 114° C., and boron fluoride, which is normally gaseous, these are most conveniently employed in the anhydrous condition, the hydrogen halides, such as for example hydrogen chloride or hydrofluoric acid, being separately introduced in the gaseous state. There will be some variations in the relative amounts of metal salts and hydrogen halides used at optimum treating conditions, but the determination of the best ratios is somewhat a matter of experiment.

"The process may be operated under batch or continuous conditions. Choosing aluminum chloride and hydrogen chloride as example of jointly used catalytic materials, batch operations may be conducted by separately adding aluminum chloride, hydrogen chloride and normal butane to a closed pressure container, after which the container is agitated or the contents stirred mechanically while the temperature and pressure are raised by the application of external heat to produce a temperature corresponding to maximum production of the iso-compound. This type of operation is better adapted to small scale production, and plants of considerable capacity are best operated in a continuous manner.

"In continuous operation the butane may be pumped through a tubular heating element at a given temperature and pressure within the approximate ranges previously specified and reaction brought about along the line of flow by the separate or joint injection of proportioned amounts of metal salts and hydrogen halides, the best example of this type of operation being the combination of aluminum

chloride and hydrogen chloride or boron fluoride and hydrogen fluoride. In the absence of moisture there will be substantially no corrosion when using these substances. After passage through the heating element the reactants may be passed to enlarged insulated chambers for the completion of the desired isomerization and the total products subsequently fractionated to recover catalysts and separate the normal and iso-butanes, after which the normal compound may be recycled for further treatment.

"Continuous operations may also be conducted by passing normal butane mixed with a hydrogen halide through beds of heated, granular catalyst, which may comprise any of the solid salts mentioned, either alone or mixed with carrying or spacing materials of a relatively inert character. This type of operation is readily utilizable in the case of such compounds as zinc chloride, iron chloride and stannic chloride. Treatment of the products in these cases will involve merely the condensation of the hydrocarbon products and the recycling of the hydrogen halides for further use.

"The following examples are introduced to indicate in a general way the nature of the results obtainable by the use of the process, though they are not introduced with the intention of correspondingly limiting the scope of the invention.

Example I

"100 parts by weight of normal butane, 20 parts by weight of aluminum chloride and 2 parts by weight of hydrogen chloride were introduced under a pressure of about five atmospheres into a pressure vessel, which was then rotated and heated for 12 hours at an average temperature of 150° C., the maximum pressure developed being about 30 atmospheres. After the bomb was cooled the hydrocarbons were released and fractionated and it was found that they consisted of 66.5% of iso-butane and 31.9% of normal butane. This indicates that the equilibrium under these conditions is considerably in favor of iso-butane.

Example II

"In this operation normal butane was passed through a tubular heating element and then into an enlarged reaction chamber, into which sublimed aluminum chloride and hydrogen chloride gas were introduced. A pressure of about 25 to 30 atmospheres and a temperature of 160° C. were maintained on the reaction vessel, after which the reaction products were separated and it was found that the hydrocarbons consisted of about 63% iso-butane and 32% normal butane. This indicates a selective conversion of the normal butane into iso-butane under these conditions.

Example III

"In this case the catalyst employed was a composite consisting of about 50 parts by weight of ground pumice and 50 parts by weight of substantially anhydrous zinc chloride. This material was placed in a vertical cylindrical reaction chamber which was insulated to conserve heat and the normal butane was preheated to a temperature of approximately 200° C. and passed downwardly through the contact mass under a pressure of approximately 30 atmospheres. Approximately 60% iso-butane and 36% normal butane were found in the reaction products, the remaining 10% comprising lighter fixed gase sand other reaction products.

Example IV

"The catalytic materials employed in this case consisted of boron fluoride and hydrogen fluoride. Normal butane was preheated to a temperature of approximately 180° C. and passed into an insulated reaction chamber at the same time as boron fluoride and hydrogen fluoride were injected. The reaction chamber was nickel-lined, as this was found to further accelerate the isomerization reactions. An analysis of the hydrocarbon products showed that they consisted of approximately 62% by weight of iso-butane and 32% by weight of normal butane, the remaining products being lighter gases and some heavier polymerized products.

"The character of the present invention and its value commercially have been shown respectively by the foregoing specification and examples introduced although the proper scope of the invention is not limited in exact correspondence with the descriptive or numerical sections."

Claim 6 of the patent, which is a typical general description of the process, is as follows: "A process for producing iso-butane which comprises passing normal butane a hydrogen halide through a reaction zone maintained under isomerizing conditions and containing a metallic halide catalyst of the Friedel-Crafts type, said conditions and the amount of said hydrogen halide being such that isomerization of normal butane constitutes the principal reaction in the process."

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Abstracts from Current Literature

"Studying Combustion in Diesel Engines by Addition of Gaseous Combustibles to the Intake Air"

By Martin A. Elliott and L. B. Berger, U. S. Bureau of Mines; Presented before Division of Gas and Fuel Chemistry, American Chemical Society, Memphis, April 21.

Information was obtained on the combustion process in Diesel engines, as an incidental finding in a study of hazards that might attend the use of Diesel engines underground. Tests were made in which natural gas was added to the intake air of an engine to simulate conditions that might exist in underground workings where methone gas liberated from the strata might contain air.

Under certain conditions it was found that a portion of the natural gas added to the intake air did not burn even though there was enough air for complete combustion and even though the gas had been present in the combustion space of the engine while the oil fuel and part of the natural gas had burned. This condition was explained by assuming that relatively "cool" regions existed in the combustion space along side regions in which combustion occurred, and it was thought to present evidence that combustion in Diesel engines is a complex process occurring in a mixture of fuel and air that is far from uniform.

Chief significance of the report is the authors' statement that it is possible that information of fundamental factors affecting combustion in Diesel engines may be obtained by adding combustible or possibly other gases to the intake air.

INDEX TO ADVERTISERS

Refining Technology Section

(See also page 47)

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8 Small Refiners Plan $10,000,000 100-Octane Plant

NPN News Bureau

TULSA — A new $10,000,000 refinery has been contracted for by 8 independent refiners in Oklahoma and Texas acting as agents for Defense Plant Corp., it was announced here June 4.

Plant, which will manufacture 100-octane gasoline and certain by-products, will be located somewhere in southern Oklahoma, the exact point dependent upon certain available facilities such as land, water, and other conditions which will be approved within the next few weeks, announcement said.

A new corporation, Associated Refineries, Inc., has been organized by the 8 refiners, headed by M. Lloyd Freese, Tulsa, Bell Oil & Gas Co., as president. L. B. Simmons, Duncan, Okla., Rock Island Refining Co., is board chairman; R. B. Anderson, Vernon, Tex., W. T. Waggoner Estate, vice-president; Roy B. Jones, Wichita Falls, Tex., Panhandle Refining Co., vice-president; B. I. Lubell, Tulsa, Bell Oil & Gas Co., vice-president; H. B. Alspaugh, Duncan, Okla., secretary and treasurer; and I. A. Anson, Tulsa, and C. D. Cund, Duncan, Okla., as assistant secretaries.

Stockholders Listed

Refiner-stockholders in Associated Refineries, Inc., are: Anderson Prichard Oil Corp., Cyril, Okla.; Ben Franklin Refining Co., Ardmore, Okla.; Bell Oil & Gas Co., Tulsa; Cosco Refining Co., Wynnewood, Okla.; LaSalle Petroleum Co., Burkburnett, Tex.; Panhandle Refining Co., Wichita Falls, Tex.; Rock Island Refining Co., Duncan, Okla.; and W. T. Waggoner Estate, Vernon, Tex.

All of the above refiners have contracted with Associated Refineries, Inc., to supply materials to the new refinery. Their plants process approximately 30,000 bbls. of crude oil per day, thus affording a secure and definite market to the producers in the area in which each refiner is presently taking oil, announcement said.

Advantages Cited

Strategic location of the new refinery in southern Oklahoma is of vital interest in the national defense program as the plant's location and nearness to the many government consuming points located in Oklahoma and North Texas fulfills a war need for aviation gasoline in the area, and at the same time, affords relief to the transportation problems which would be involved were shipments in the area to be made from coastal or other distant points, announcement added.

Contracts are being let to Universal Oil Products Co. for basic design, and to Frick Reid Supply Co., Tulsa, for construction.

Shell Experiments With New Process To Make Butadiene

NPN News Bureau

WASHINGTON — Shell is working on a new process to make butadiene from ethylene extracted from propane, D. Pyzel, vice-president of Shell Union Oil Co., told Gillette committee on June 2.

Mr. Pyzel said the estimate of 2 years "is a little bit too long" for completion of the rubber program.

Shell, he added, is operating a butadiene plant at Houston with an output of about 10 tons and a capacity of 15 tons daily. He estimated the price of butadiene at 18c a lb.

Sen. Gillette, chairman of the subcommittee, read into the record a May 25 letter from President W. B. Plummer of Rubber Synthetics, Inc., saying the company's proposed butadiene plant at Gary, Ind., is to be stepped up to 150,000 tons a year from 135,000 and would reach its first 50,000 tons capacity by June 1, 1943; second 50,000 on Aug. 1, 1943; and third 50,000 on September 1, 1943.

The company was formed to operate the $85,000,000 plant by Indiana Standard, Sinclair Refining, and Cities Service.

W.P.R.A. Plans Symposium on Specifications

NPN News Bureau

TULSA — Western Petroleum Refiners Assn. technical group will hold a symposium on specifications at its meeting in Shreveport, La., June 12, at Washington-Youree Hotel.

Symposium will be presented in three parts: The first dealing with gasoline specifications by A. W. Trusty, chief chemist, Arkansas Fuel Oil Co.; the second dealing with lubricant specifications by H. J. Sheard, superintendent, Bayou State Oil Corp.; and the third dealing with fuel oil specifications by W. M. Carney, chief chemist, Lion Oil Refining Co. J. K. MacKinnon, general manager, Talco Asphalt & Refining Co., will be chairman.

First 'Fluid Catalyst' Unit Exceeds Anticipated Output

NPN News Bureau

NEW YORK — New Jersey Standard announced June 8 that the first of the new fluid catalyst refining units under construction had started operation, with output during first 10 days exceeding anticipated capacity by 20%.

"Success of the initial operation is of importance to the entire industry since more than 30 similar plants throughout the country are being built (about 20% by Esso refineries and remainder by other oil companies) at a cost of well over $100,000,000," the announcement said.

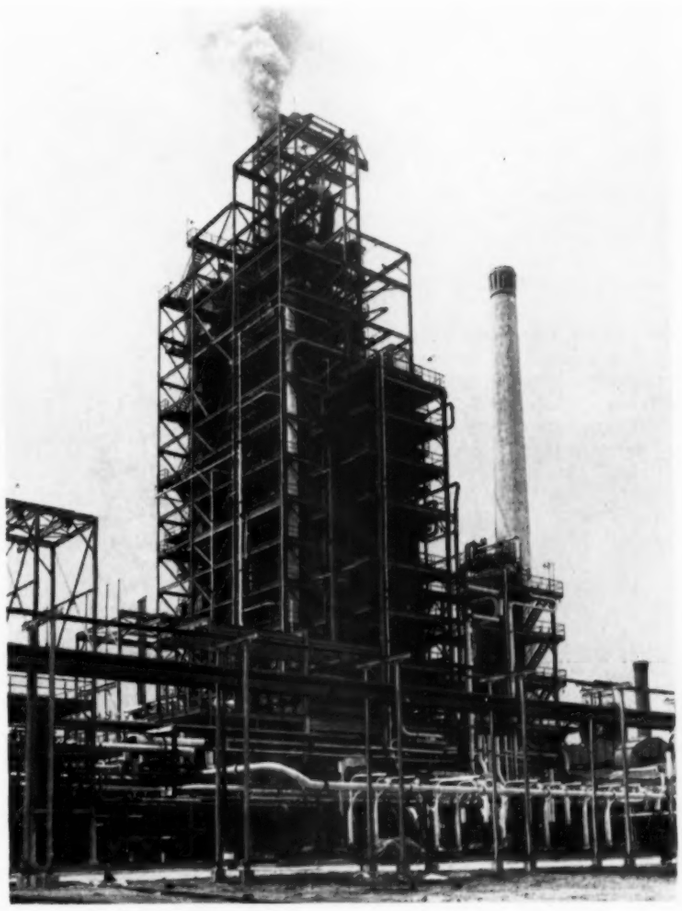
Through operation of the fluid catalyst units by a new process, Jersey claims production of "the anticipated volumes of 100-octane aviation gasoline" and raw materials for synthetic rubber can be achieved simultaneously. This had been announced earlier (*NPN May 27, p. 16*).

Completion in '43

All told, according to the Jersey company, fluid catalyst crackers now under construction and due for completion in the middle of 1943 will provide a potential annual production, under this new procedure, of enough additional butylenes for 400,000 tons of Buna S rubber and 240,000 tons of Butyl rubber.

In the fluid catalyst process, the catalyst is finely ground and moves like a liquid through the reaction vessels in a continuous stream.

New 'Cat' Unit in Operation



First fluid catalyst refining unit completed (location undisclosed), exceeded anticipated output by 20% during first 10 days of operation. Thirty similar units are building; will produce both 100-octane gasoline and synthetic rubber base stocks

Scarcity of Critical Metal Brings Plant Design Change

NPN News Bureau

WASHINGTON — Oil industry will have to pull in its belt in the use of steel, chromium, aluminum and other critical materials which are so scarce that it will be a problem to find enough to meet military needs.

Office of Petroleum Co-ordinator warns that engineers, who formerly designed equipment for long life, will have to revise specifications and plan less permanent structures. Structural steel may be used only where absolutely necessary, with the industry turning to loading racks with wooden structures and walkways, OPC said.

Because the materials shortage will grow continually more serious, "industry must get ready to 'patch and pray' to keep existing equipment at work, according to William L. Batt, chairman of War Production Board's Requirements Committee.

At a joint press conference on June 3, Mr. Batt and WPB Materials Director A. I. Henderson outlined the following 5 point program:

Long-range planning of requirements for materials and careful scheduling to meet them; revision of specifications to reduce the amounts of scarce materials used; greater use of substitutes; increased scrap collection; and careful handling of scrap and secondary metal by industry to obtain the maximum use.

Must Use Substitutes

In a June 1 statement, OPC said WPB is rejecting many priority applications because they call for critical materials for which substitutes could be used. Critical materials will be denied if substitutes can be used.

OPC said these materials, used at times by the oil industry, are critical:

Aluminum, asbestos, cadmium, calcium-silicon, chromium, cobalt, cork, copper and copper alloys, lead, magnesium, plastics, nickel, rhodium, steel and iron of all types and their alloys, tin, tinplate and terneplate, tungsten and tungsten carbides, vanadium, zinc and zinc coated metals, cotton duck, manila fiber and cordage, jute, burlap, Kraft paper, lead manganese, mercury, sisal, and rubber of all types.

Engineers were urged to eliminate, or at least reduce so far as possible, the use of those materials in plants, OPC added.

OPC's materials division said WPB is denying applications for the following materials and equipment:

Galvanized iron and steel pipe, except where the properties of the water demand zinc coating. Steel water tanks except closed pressure types. Both black and galvanized corrugated iron and sheet for side walls and roofs for buildings. Eighty-five percent magnesia pipe covering for insulation purposes except where temperature exceeds 212°. Metal base plumbing fixtures. Cork for insulation except where extremely low temperatures are required. Valves and fittings which are trimmed with chromium, stainless steel, bronze, brass, or nickel except to meet special processing requirements; valves over 2 in. with brass bodies are usually prohibited. Steel sash, windows and frames, steel bucks, steel doors and frames, steel roof decking, metal roofing, except where fire hazards exist. New steel storage tanks to be used for fuel, crude and other heavy oils when it is practicable to construct concrete storage tanks. Cast iron soil pipe, or sewage pipe except those of standard weight and then only those portions required within a building. Ferrous metal for water mains where asbestos cement, concrete or wood pipe is practicable. Water well screens made of brass, copper, and other non-ferrous alloys. Steel wire fence of the chain link type. Ferrous metal culverts. Electric conduit (metal) where wiring can be safely installed without it. Stand-by equipment; spare parts are to be held to a bare minimum.

Use Form PD-200

OPC urged the industry to fill out forms PD-200 and PD-200-A in strict conformity with WPB regulations, and not to include construction or well drilling equipment on these forms because such equipment is not part of the finished project.

Applications for machine tools, rubber products, chemicals, business machines, office furniture, office supplies, automobiles, trucks and tires should not be made on project applications since they are governed by special orders.

Designs should be so drawn that use of aluminum and steel plates are either minimized or eliminated, and "every effort should be made to keep steel plates under ⅜ in. if steel must be used".

WPB is apt to deny applications for aluminum, stainless steel, chromium steel, nickel, tin and copper unless the application clearly states why such material can be used and that the percentage of critical materials has been reduced to the minimum.

"The War Production Board suggests that where scarce alloys are necessary," OPC continued, "we plan on frequent replacements, if by so doing, we are able to reduce the amount of such scarce materials, unless such replacements would cause extraordinary expense, such as tearing down boiler settings, etc. Frequently, 1.5% chromium steel will give 2 years service, in equipment which is usually designed with 4-to-6% chromium. Every pound of chromium steel which the petroleum industry uses must be taken from a ship or a shell."

Use Second Hand Goods

Second hand steel storage tanks and tubular goods should be used wherever possible in lieu of new material. The smallest and lightest pipe possible should be used.

The steel industry is operating at better than 99% of capacity, Mr. Batt said, and production may reach 85,000,000 tons this year. A projected 10,000,000 ton increase in capacity probably will be only 65 to 70% completed to save critical material, and "every ton of steel we can produce must do the work of two".

Despite the fact the Allies control nearly all of the world's supply of nickel, he added, there will not be enough to meet all demands.

U. S. will use this year about 1,000,000 tons of chromium which was imported almost altogether before the war. Mr. Batt estimated, pointing out that domestic supplies are being developed.

Production of aluminum, limited by materials necessary for plant construction, may reach more than 2,500,000,000 lbs. next year, compared with primary production of 330,000,000 lbs. in 1939.

Non-essential civilian users, he continued, cannot expect to have any copper and only a bare minimum will be available for essential non-military needs.

Shortages exist, he said, in natural and synthetic ammonia, butadiene, styrene and other chemicals for synthetic rubber, sodium nitrate, chlorine, phenol, toluene, oleum, aniline, benzol, coal tar products, fats and oils, and glycerine. Toluol demand has increased 240% over 1939; industrial alcohol, 130%; chlorine, 83%.

District 3 Asked To Maintain Runs At Levels of May

NPN News Bureau

WASHINGTON — June refinery runs in District 3 are to remain at same levels as in May, with whatever adjustments were made during May, the Office of Petroleum Co-ordinator has informed refiners in this district.

OPC adjustments, made in May, a spokesman said, included exemption of New Mexico from any readjustment.

Refiners in District 2 were asked to reduce their gasoline yield to 80% of the average percentage yield for 1941, while District 1 refiners were simply asked to make a maximum of fuel oils at expense of other products.

Arkansas Specified

Arkansas refineries were put on the same basis as District 2 refiners.

On May 1, OPC said it had telegraphed 112 District 3 refiners, requesting that in May they process crude at a daily rate not to exceed a maximum of 70.5% of daily average for last half of 1941.

At the same time, a number of refineries working on war products were given specific operating rates. Moreover, some individual adjutsments were made for other plants.

California 'Gas' Demand Down; Heavy Fuels Up

NPN News Bureau

WASHINGTON—Total gasoline demand in California during April dropped 17,000 bbls. daily to 215,000 bbls. daily, Bureau of Mines reports, while total heavy fuel oil demand increased 50,000 bbls. daily to 366,000 bbls. daily.

The Bureau commented:

"Some idea of changing conditions may be gained by comparing these figures with those for April 1939, when total gasoline demand was 223,000 bbls. daily and total heavy fuel oil demand of 227,000 bbls. daily was only 4,000 bbls. daily greater, or with April 1938, when gasoline demand actually exceeded heavy fuel oil demand by 13,000 bbls. daily."

Correction

General Preference Order No. M-170, covering styrene, as issued June 1 showed the effective date to be June 1, instead of July 1 as reported by NPN last week.

Plan...

Webster defines *Plan* as "A method of action or procedure."

The plan . . . the method of procedure selected to make Gulf petroleum products is judged mainly on this basis: Will it permit us not only to meet any and all standards . . . but actually exceed them.

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PRODUCTION NEWS

Texas Court Enjoins Well

Special to NPN

AUSTIN—The Office of Petroleum Co-ordinator, cannot order a Texas oil well to continue in operation if that well was drilled in violation of state law, Judge Roy C. Archer in 126th District Court has ruled.

The Travis county court ruling is believed to be the first in the state involving the powers of the OPC.

The Atlantic Refining company, later joined by Gulf and Sun, had sought to enjoin Former Gov. M. E. Trapp of Oklahoma and his associate, G. T. Blankenship, from producing oil from a Gregg county, Texas well. Atlantic charged that three wells were already on the lease, and that the fourth constituted a violation of the state's famed Rule 37 governing well spacing.

OPC Order Quoted

Messrs. Trapp and Blankenship countered with the OPC's "Recommendation No. 47", an order prohibiting the abandonment of any well that is producing enough to pay expenses and taxes.

Judge Archer ruled, however, that even though the "recommendation" constitutes a federal order, it cannot apply on a well that was illegally drilled. He ordered the permit granted for the well by the Texas Railroad Commission be cancelled.

OPC, in an amendment signed on May 20, clarified Recommendation No. 47—which halted premature abandonment of wells—and said that the order's provisions shall not affect the exercise of such discretion as the courts or regulatory body of any state may possess to enjoin the operation or compel abandonment of illegally drilled wells.

Attorneys for the Oklahoma operators gave notice of appeal to the Third Court of Civil Appeals in Austin.

LPG Sales in California Increase 42% in 1941

NPN News Bureau

WASHINGTON — Liquefied petroleum gas sales in California during 1941 increased 42% over 1940, setting a record total of 102,885,000 gal. (excluding exports), Bureau of Mines reports.

Sales of L. P. G. to the federal government, said the Bureau, contributed materially to the high total of sales, adding, "the effect of transportation difficulties and equipment restrictions upon current sales is not apparent . . . Doubtless, the adverse effect of restrictions will become more pronounced later in the year, but above data, the only available at this time, indicate that the high level of industrial activity and direct sales to the government have more than offset possible losses elsewhere."

Interstate Compact to Hear Reports On Methods for Secondary Recovery

Special to NPN

OKLAHOMA CITY — Secondary recovery and pressure maintenance, means by which oil reserves may be recovered with minimum use of steel, will be studied at next quarterly meeting of Interstate Oil Compact Commission in Lexington, Ky., June 19-20, according to Secretary Charles L. Orr.

Each of commission's standing committees has chosen one phase of secondary recovery for study and report. Individual reports from all states will be gathered into a national survey during committee meetings June 19, the whole picture being presented June 20 at general session.

Engineering committee will discuss accepted and approved engineering principles of secondary recovery; legal committee will report legal aspects and principles of secondary recovery, repressuring and recycling; research and co-ordinating committee will present factual and technical data and make nationwide survey on secondary recovery projects and survey of state rules and regulations will be reported by regulatory practices committee.

Meeting at Lexington will mark first time sessions have been held so far east, and officials are expecting large attendance by operators and public officials from Kentucky, Ohio, Pennsylvania, Indiana, Tennessee and West Virginia.

Kansas to Suggest Plan For Well-Spacing

Special to NPN

WICHITA, Kans. — Kansas State Corporation Commission, at request of Office of Petroleum Co-ordinator, will hold hearings here June 15 to take testimony enabling it to make recommendations to OPC's production for a well spacing program under Order M-68 for certain oil and gas pools in Barton, Russell and Reno Counties.

Pools involved are: Hendrickson, Schweizer, Peace Creek, Peace Creek Northeast, Peace Creek Southwest, Trapp, West Trapp and Karst.

Texas Production Quotas 'Unfortunate'—Ickes

NPN News Bureau

WASHINGTON — Petroleum Co-ordinator Ickes told his press conference that "it is unfortunate" the Texas Railroad Commission "insists on allowing an amount that doesn't conform to our estimate of what they ought to allow."

He was referring to fact that Texas is exceeding Office of Petroleum Co-ordinator's recommended production rates for June, and had been asked: "Are you happy about the Texas allowable for June?"

Mr. Ickes said at the June 4 conference he hadn't heard from Texas on this subject, later adding, "we think that all we have to do is let nature take its course because supply and demand and available storage will determine in the end whether they can bring in more than we set".

Texas Crude Stocks Soar; Other Areas Decline

NPN News Bureau

WASHINGTON—Texas crude stocks increased 3,077,000 bbls. in a single week, from 94,369,000 bbls. to 97,446,000 on May 30, Bureau of Mines reports.

Crude stocks in the U. S. totaled 255,023,000 bbls. as compared with 253,423,000 bbls. week before.

The largest decreases were in Illinois-Indiana area—down 699,000 bbls., California—down 355,000 bbls., Oklahoma—down 295,000 bbls. and Rocky Mountain area—down 196,000 bbls. Other area changes were relatively slight.

Banks to Go Easy On Oil Producers

NPN News Bureau

WASHINGTON — Southwestern oil producers with good collateral need have no fear now that any bank will foreclose their loans because payout has been slowed by curtailed production due to war conditions, according to Charles F. Roeser, Fort Worth producer, who headed a committee of Independent Petroleum Assn. of American working on the problem.

Federal bank examining officials, both in Washington and in the Southwest, have taken the view that a "good loan last November is a good loan now", Mr. Roeser told NPN here June 5. And these officials, Mr. Roeser added, have instructed Southwestern bank examiners not to be too critical of any oil loans which might seem to be on a rather slow payout basis as of this time.

To Confer Again

Mr. Roeser said he told federal bank examiners that the transportation bottleneck, which was backing up Texas crude and products, might be somewhat relieved by January 1 but that nationwide gasoline rationing—if imposed—would reduce crude oil requirements, creating additional problems for producers. He said the bank examiners suggested that he come back around January 1st for another conference.

Meanwhile, Reconstruction Finance Corp. stands ready to make loans to oil producers "at fair interest rates and reasonable terms", Mr. Roeser pointed out (*See NPN May 13, p. 7*).

Mr. Roeser is credited here with having interested Jesse Jones, RFC chairman in the producers' plight.

Blasting Caps Exempted

NPN News Bureau

WASHINGTON—Drilling detonators and blasting caps are exempted in War Production Board's Conservation Order M-43-a, rewritten June 5 to further limit the use of non-critical products.

Named Supervisor by Texas

AUSTIN—J. L. Greer has been named acting deputy supervisor of the Texas Railroad Commission's Oil and Gas Division No. 3, with headquarters in Houston. He succeeds Vaile Henry.

To put more "drive" in production–

A NEW **BLACK**

E-C CORD MULTI-V BELT

–the most efficient V belt ever built!

AFTER years of testing in the field Goodyear announces a major improvement in its famous E-C Cord Multi-V Belt – an advance that sets a new standard in V belt efficiency.

Now this time-proved belt is sheathed with a new, tougher, *black* cover that insures longer wear, more uniform pull and higher resistance to heat, oil and other enemies of long belt-life.

More uniform pull and better balanced performance result from the fact that it is possible to build this new black cover with a more consistent coefficient of friction, essential to a balanced drive.

No relaxed cords — none overtaut

Add to this the patented Goodyear "COMPASS" Cord construction that concentrates the load-carrying cords in the neutral axis where all pull evenly, without uneven stresses – and it is easy to understand why this new belt delivers higher efficiency on multi-V drives.

The new black E-C Cord Multi-V Belt is made in all standard cross-sections and lengths – sold in sets precision-matched under operating tensions. Order from your Goodyear Mechanical Rubber Goods Distributor.

1—Heavy, super-tough black cover with uniform friction, longer life.

2—Tension Section.

3—Neutral plane with heavy endless load-carrying Compass cord.

4 — Compression Section.

5—Insulating Gum.

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MECHANICAL GOODS

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Tires for All:

P.I.W.C. Proposes Program To Keep Cars on the Road

NPN News Bureau

WASHINGTON—Program for keeping all mechanically-usable cars on the road for the next six years—at a cost of only a few thousand tons of crude rubber annually—was recommended June 2 by the Petroleum Industry War Council.

In 1943, for example, 8400 tons of new rubber would keep 23,900,000 passenger cars rolling whereas, if there are no rubber replacements, only 9,000,000 would still be on the road at end of next year (assuming normal speed and mileage).

Accompanying chart, included in the report to P.I.W.C. by its rubber committee, shows graphically how sharp will be the drop in cars on the road in the next few years, if there are no rubber replacements.

Program would require large quantities of reclaimed rubber. For example, in 1943, although only 8400 tons of new rubber would be needed, reclaim requirements amount to 103,900 tons.

To provide for this, the P.I.W.C. recommended a 3-point program for increasing the flow of scrap rubber to the reclamation plants.

3-Point Program Urged

Organization of a scrap rubber program was urged, to cover the following:

1. Establishment of price incentives to encourage the delivery and collection of scrap and promote the manufacture of reclaimed rubber.

2. Development of a country-wide plan for the utilization of the filling station as an effective mechanism for gathering worn and discarded tires, granting the dealer a commission for his efforts; and

3. Utilization of the device of an inducement to the individual of a negotiable certificate entitling him to buy one recap for each discard turned in, or one tire made of reclaimed rubber for each two discards delivered.

Small amount of new rubber needed for each tire in the P.I.W.C. program is indicated

(*Continued on page* 34)

Upper and Lower Limits of Passenger Cars in Use in the United States By Years, 1941-1947

(In Millions of Cars)

End of Year	Mechanically Usable Cars With No Replacements and Adequate Rubber (Curve 4, Fig. 1)	Cars in Use, With No Replacements No Additional Rubber, At Normal Speed and Mileage (Curve 1, Fig. 1)
1941	27.0	27.0
1942	25.6	23.7
1943	23.9	9.0
1944	21.9	1.2
1945	19.6	0
1946	17.0	0
1947	14.0	0

Gain in Passenger Cars in Use Attainable By Organized Conservation

(In Millions of Cars)

End of Year	Cars in Use Without Conservation and Without Additional Rubber (Curve 1, Fig. 1)	Cars in Use With Conservation But Without Additional Rubber (Curve 2, Fig. 1)	Gain in Cars in Use (Difference)
1941	27.0	27.0	0
1942	23.7	24.8	+ 1.1
1943	9.0	20.4	+11.4
1944	1.2	12.3	+11.1
1945	0	5.6	+ 5.6
1946	0	1.6	+ 1.6
1947	0	0	0

Gain in Passenger Cars in Use Attainable By Recapping and Its Cost in Rubber

Year	Cars in Use With Conservation (Curve 2, Fig. 1)	Cars in Use With Conservation and Recapping (Curve 3, Fig. 1)	Gain in Cars in Use (Difference)	Rubber Needed—Crude	Rubber Needed—Reclaimed	Rubber Needed—Total
	Millions of cars end of year			Thous. long tons per year		
1941	27.0	27.0	0	.	.	.
1942	24.8	25.4	+0.6	4.5	48.8	53.3
1943	20.4	22.8	+2.4	6.7	71.2	77.9
1944	12.3	19.0	+6.7	6.4	67.6	74.0
1945	5.1	13.5	+8.4	5.3	55.4	60.7
1946	1.6	8.0	+6.4	4.0	42.8	46.8
1947	0	3.8	+3.8	3.0	31.9	34.9

Gain in Passenger Cars in Use Over That Attainable by Conservation and Recapping, by Providing Sufficient Rubber to Keep All Usable Cars on the Road

Year	Cars in Use With Conservation and Recapping	Cars in Use With Conservation, Recapping and Reclaimed Tires	Gain in Cars in Use (Difference)	Rubber Needed—Crude	Rubber Needed—Reclaimed	Rubber Needed—Total
1941	27.0	27.0	0	.	.	.
1942	25.4	25.6	+ 0.2	0.4	8.4	8.8
1943	22.8	23.9	+ 1.1	1.7	32.7	34.4
1944	19.0	21.9	+ 2.9	3.6	79.9	83.5
1945	13.5	19.6	+ 6.1	7.2	157.6	164.8
1946	8.0	17.0	+ 9.0	8.8	197.6	206.4
1947	3.8	14.0	+10.2	6.5	156.4	162.9

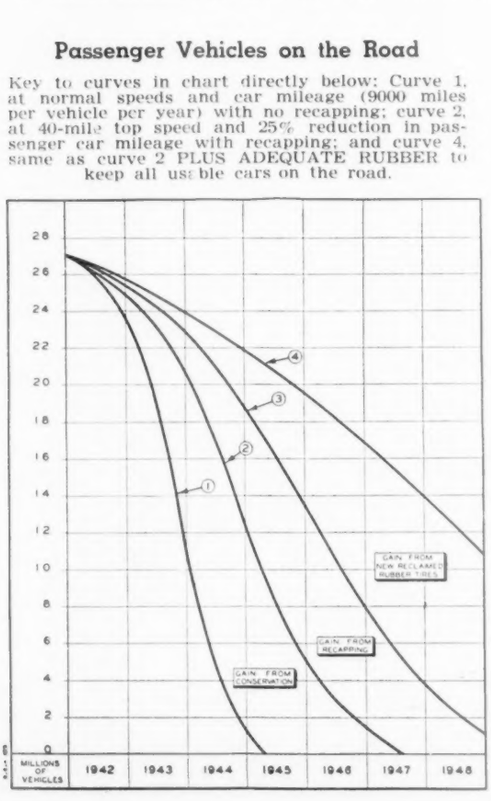
Rubber Required to Maintain All Usable Passenger Cars on the Road

(In Thousands of Long Tons)

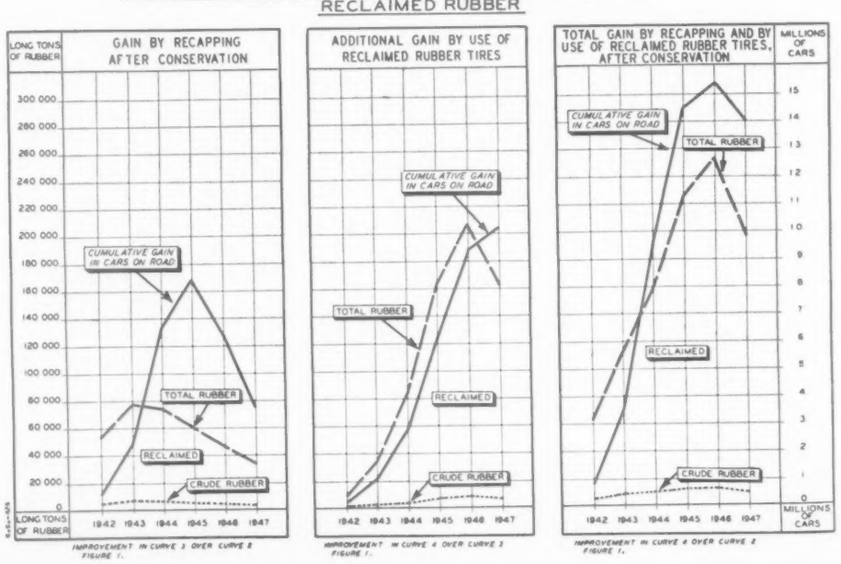
Year	Rubber Needed to Recap Existing Tires—Crude	Rubber Needed to Recap Existing Tires—Reclaimed	Additional Rubber Needed to Keep Usable Cars on Road—Crude	Additional Rubber Needed to Keep Usable Cars on Road—Reclaimed	Total Rubber Required—Crude	Total Rubber Required—Reclaimed
1942	4.5	48.8	0.4	8.4	4.9	57.2
1943	6.7	71.2	1.7	32.7	8.4	103.9
1944	6.4	67.6	3.6	79.9	10.0	147.5
1945	5.3	55.4	7.2	157.6	12.5	213.0
1946	4.0	42.8	8.8	197.6	12.8	240.4
1947	3.0	31.9	6.5	156.4	9.5	188.3

Passenger Vehicles on the Road

Key to curves in chart directly below: Curve 1, at normal speeds and car mileage (9000 miles per vehicle per year) with no recapping; curve 2, at 40-mile top speed and 25% reduction in passenger car mileage with recapping; and curve 4, same as curve 2 PLUS ADEQUATE RUBBER to keep all usable cars on the road.



GAIN IN PASSENGER CARS IN SERVICE BY USE OF RECLAIMED RUBBER


GAIN BY RECAPPING AFTER CONSERVATION
ADDITIONAL GAIN BY USE OF RECLAIMED RUBBER TIRES
TOTAL GAIN BY RECAPPING AND BY USE OF RECLAIMED RUBBER TIRES, AFTER CONSERVATION
LONG TONS OF RUBBER
MILLIONS OF CARS
CUMULATIVE GAIN IN CARS ON ROAD
TOTAL RUBBER
RECLAIMED
CRUDE RUBBER
1942 1943 1944 1945 1946 1947

Oil TRANSPORTATION

Senate, House Groups Split On Navy's Anti-Sub Warfare

NPN News Bureau

WASHINGTON—Senate naval affairs committee is dissatisfied with steps taken by the Navy to combat German submarines lurking off the American coasts and it is possible that a subcommittee might hold open hearings to develop more information on Navy's precautions.

Sen. Allen J. Ellender, La., chairman of the subcommittee, told NPN he thought the Navy had "fallen down on the job" of providing enough small boats to fight submarines and keep them away from the coastwise shipping lanes where a large number of tankers have been sunk.

Vinson Upholds Navy

Meantime, Chairman Vinson, Ga., of House naval affairs committee, said the Navy's anti-submarine organization, hampered at first by inadequate facilities to manufacture small craft and special equipment necessary, "has now passed through its period of growing pains, is well established and is functioning efficiently."

In a Navy-approved statement, Rep. Vinson scored criticism of the Navy for not better protecting coastal cargo ships. He said Admiral Ernest J. King, commander in chief of the fleet, knew better where naval vessels are needed.

"Who shall say," he asked, "that the decision as to dividing these craft has not been sound, when it is realized that so far we have not lost a soldier of the many thousands sent overseas?"

In the last few weeks, enemy submarines have been operating farther from shore, but Germany's submarine-building program cannot now match our program of building weapons to combat the undersea craft, he said.

Ellender Seeks Facts

Sen. Ellender, on the other hand, said a hearing might be necessary, but emphasized he "hates to provoke a hearing during wartime" and indicated he would avoid it if possible.

Two weeks ago, he said, he presented to the full committee some information in his possession, which he did not care to discuss publicly, and it was decided that he should present the same information to the Navy to secure its side of the argument. Much of that information has come in and more still is being received. He said the subcommittee would "sift the facts" before deciding on a public hearing.

Sen. Ellender made it plain that he thought the Navy should use small boats as anti-submarine weapons rather than use larger combat craft to escort merchant ship convoys.

Subcommittee, he added, intends to learn what the Navy has done and plans to do in this regard and "probably be able to obtain enough information without hearings."

130-Hour Week Set For Dakota Trucks Through 3 'Pools'

Special to NPN

YANKTON, S. D. — Three "pooling" corporations have been formed by South Dakota oil truckers to achieve 130-hour per week operation of all trucks as requested by Office of Defense Transportation.

South Dakota was divided into 3 areas, with the area east of the Missouri River covered by Petroleum Carriers, Inc., of which Leonard Wudel, Mitchell, S. D., Wudel Gas and Oil Co., is president. Petroleum Carriers has been granted intrastate common carrier authority and plans to establish offices at Sioux Falls. Other officers are: William Mundhenke, Aberdeen, of Mundhenke Oil Co., vice-president; H. H. Wheelhouse, Parker, or Wheelhouse and Wolfe Oil Co., secretary-treasurer. Messrs. Wudel, Mundhenke and Wheelhouse, together with Lowell Crabb, Wagner, of Dakota Transport Service, and Jack Nicholls, Yankton, of Nicholls Oil Co., make up the board of directors.

Seek Interstate Rights

Oil Transporters, Inc., incorporated by Fred E. Fankell, Rapid City, of Puritan Oil Co., J. W. McKeever, Rapid City, of Midwest Oil Co., and C. G. Skartvedt, Rapid City, of Skarty Oil Co., has asked for interstate authority to haul from refineries at New Castle, Glenrock, Casper, Parco and Cheyenne, Wyo., and Chadron, Nebr., to all bulk plants located in western South Dakota except in following counties: Gregory, Tripp, Todd, Bennett, Washabaugh, Mellette, Lyman, Jones and Stanley. This application is pending before the Interstate Commerce Commission.

The third group, to be known as the Rosebud Petroleum Transporters, will ask for intrastate authority from Sioux Falls, S. D., to all points within the counties named as not included in the territory of Oil Transporters, Inc. Principals in Rosebud are: E. R. King, Winner, King Oil Co.; George Scholl, Gregory, Gregory Independent Oil Co.; Walter Dale, Gregory, Dale Independent Oil Co.; Joe Lineback, Winner, Lineback Motor Co.; and Elmer Hewett, Winner, Hewett Oil Co.

W.E.C.A. Approves Operation Of Over 300 Tank Trucks

NPN News Bureau

SPARTANBURG, S. C.—Instructions have gone out to 85 transporter members of War Emergency Co-operative Assn., authorizing immediate operation of over 300 tank trucks as common carriers in the Carolinas, Georgia and Florida, according to L. A. Odom, Spartanburg, president of W.E.C.A.

Mr. Odom told NPN that he expects 1,200,000 gal. daily to be hauled by W.E.C.A. trucks, utilizing "idle" truck equipment.

An insurance company has issued blanket coverage for cargo, property damage and public liability on a gross receipts basis, Mr. Odom said.

WSA Covers Cargo Risk

NPN News Bureau

WASHINGTON — War Shipping Administration's plan for absorbing wartime costs of tanker shipments, over and above basic rates established by U. S. Maritime Commission (*NPN May 27, p. 39*), was officially interpreted June 4 as including war-risk insurance on cargoes. Interpretation was given by Office of Price Administration. The plan was effective as of April 20, 1942.

Clarify Operation Of 130-Hour Week, Truckers Ask ODT

NPN News Bureau

WASHINGTON—Office of Defense Transportation has been asked to clarify its policy on a 130-hour week for tank trucks, stating what types of trucks are covered.

Request came from representatives of eastern for-hire truck operators who say that some major oil companies have interpreted this policy to mean that all of their tank trucks over 1900-gal. capacity—even route trucks hauling from bulk plants to service stations and consumers—had to be operated a minimum of 130 hours weekly.

ODT's policy on operating hours was stated at oil trucker meetings along the Atlantic Seaboard in past few weeks, with the hint that if tank trucks were not operated at least 130 hours weekly they would be regarded as "idle" and subject to leasing or being forced into some kind of "pool" (*NPN May 13, p. 4*).

This prompted some major companies, it was said, to put even their smaller tank trucks into transporting products, lest they lose control of their equipment. Result was, according to the for-hire truckers, that much hauling business was diverted from the for-hire transports.

Called to Meeting

A meeting of the chairmen and vice-chairmen of the four regional advisory committees was called June 2 at American Trucking Associations, Inc., offices here. To that meeting were invited representatives of major oil companies. Karl J. Eisenhardt, York, Pa., of Coastal Tank Lines, Inc., was elected acting chairman of the meeting.

Consensus of the meeting, according to a statement issued by Mr. Eisenhardt, was that ODT's request that tank truck equipment be used a minimum of 130 hours weekly, was not intended to apply to local or delivery trucks.

Meeting suggested that ODT issue a clarifying statement,

confining the 130-hour week policy to tank transports. Suggested definitions for "tank transport" and "retail delivery tank truck," were:

Types of Trucks Defined

"**A tank transport** is of the size and type designed for and customarily utilized in the transportation of a bulk liquid cargo from source of supply to destination. Such units are ordinarily utilized between refineries, pipeline or water terminals, and other sources of supply, and points of storage or consumption. They usually transport the maximum load permitted by weight limitations and replace or supplement rail, water or pipeline service."

"**A retail delivery truck** is one of the size and type designed and customarily utilized for distribution of a liquid cargo to retail outlets or consumers. It varies in size, compartments and piping, and is designed to meet the requirements of the various local departments of weights and measures and other local authorities and may be called upon to handle products that vary in volatility. These units are ordinarily employed to deliver products within a local district. Further, they ordinarily deliver to outlets which have small storage capacity and the operator may be called upon to make cash collections and solicit future orders."

Amend L-70, L-56 To Cut Deliveries, War Council Urges

NPN News Bureau

WASHINGTON — Easing of War Production Board's Conservation Orders L-70 (gasoline) and L-56 (fuel oil) to cut down the number of deliveries, was recommended here at the June 2-3-4 meeting of the Petroleum Industry War Council.

P. I. W. C. urged that certain sections of both orders be amended so as to permit fuller utilization of trucks. For L-70, if a partial delivery is needed to round out a month's quota, during the last week of a month, the extra gallonage involved should be held over until the first of the following month, according to the suggested amendment.

Suggests Amendment

"Or else," P. I. W. C. says the amendment order should read: "Sufficient of the following month's quota can be delivered in conjunction with the partial delivery to enable maintenance of the average size of delivery to that particular service station or bulk consumer."

As order now reads, on the 10th and 20th of each month, no more than 1/3 and 2/3, respectively, of any service station's or bulk conumer's total monthly quota is to be delivered.

In its suggested amendment to L-56, P. I. W. C. asks that suppliers be allowed during the 90-day period from June 3 to Aug. 31, to deliver more than 50% of allowable consumption in any single month, but not "in excess of 50% of the total amount of fuel oil required during the remainder of this period for a similar time in 1941."

As order now stands, no supplier may deliver in excess of 50%, in any month, of deliveries made during the corresponding month in 1941.

P.I.W.C. Requests ODT Amendment In Orders 5 and 6

NPN News Bureau

WASHINGTON—Relief from the Office of Defense Transportation's General Orders 5 and 6 is being sought by the Petroleum Industry War Council in a resolution to the Petroleum Co-ordinator asking that he recommend to ODT the exemption of all motor trucks used in connection with the transportation by pipeline of crude, natural gas, natural gasoline and associated hydrocarbons, as well as the discovery of new pools from provisions of these orders.

ODT orders 5 and 6, P. I. W. C. says, "appear to restrict the use of motor trucks for over-the-road service and local delivery." After July 1, ODT has ruled that trucks are not to haul gross loads exceeding their capacity by over 20%.

Wildcat Needs Cited

Moreover, ODT, after July 1, has also ruled that over-the-road services shall not be operated unless trucks are loaded to capacity at point of origin.

P. I. W. C.'s resolution points out that often wildcat wells are drilled for from other operations and that "emergencies frequently develop which require prompt transportation of property, material and equipment considerable distances, and it is not practicable to delay operations."

In view of this, P. I. W. C. resolved:

"For each and all of the foregoing reasons, be it resolved that the Petroleum Industry War Council recommends that the Petroleum Co-ordinator for War immediately urge upon the Director of Defense Transportation the importance and necessity of exempting all motor trucks used in connection with the production and transportation by pipe line of crude petroleum, natural gas, natural gasoline and associated hydrocarbons and the discovery of new pools, from the provisions of said order."

Status of Truck Rationing

NPN News Bureau

WASHINGTON—A total of 37,584 trucks, truck trailers and miscellaneous vehicles have been released under commercial vehicle rationing program which started on March 9, according to War Production Board.

WPB announced on June 1 that 4214 vehicles had been released during week ended May 30.

OPC Names District 3 Group To Speed Oil Flow Eastward

NPN News Bureau

WASHINGTON—Office of Petroleum Co-ordinator has appointed an 11-man Supplies and Distribution Subcommittee for District 3 to work out most efficient means of moving crude and products from this district to District 1.

Aim of this committee will be to increase shipments into District 1 by the quickest and most efficient methods. Some of these methods, OPC says, are to include:

1—Reduction to a minimum of oil movements from District 2 into District 3;

2—Elimination of oil movements in southerly or westerly directions by barge, pipeline or tank ships;

3—Elimination of cross-hauling;

4—Increasing oil supplies in the northern and eastern parts of District 3 at points for pipeline, tank car and barge movements into District 1 and 2, and through District 2 to District 1.

By-Pass Bulk Plants

Moreover, this plan provides for:

"The elimination of all unnecessary use of transportation hauling facilities to bulk plants for redelivery to buyers to the extent that delivery can be more efficiently made directly from the point of manufacture to the consumer, provided that in all cases where such redeliveries have been heretofore made by a jobber or wholesaler, direct deliveries shall be made for the account of such jobber and wholesaler."

This committee was formed, OPC explains, because of problems which did not come under jurisdiction of any single district functional subcommittee. It has the approval of Chief Counsel J. Howard Marshall, pursuant to OPC Recommendation No. 33.

District 3's Transportation Committee is to provide for the following:

Other Measures Requested

"The reversal of any pipe line movements of petroleum and petroleum products from a southerly or westerly direction to a northerly or easterly direction.

"The installation of additional pipe line facilities and the providing of additional pipe line capacity by looping lines, making cross-connections, and increasing pumping capacities so that the movement of petroleum and petroleum products generally in a northerly and easterly direction shall be increased.

"The elimination of all tank car movements within District 3 in distribution of gasoline, kerosine, and burning oils of No. 4 grade or lighter, and the substitution of tank truck movements therefor, even though increased costs are incurred.

"The common use of tank cars at each point from which tank car shipments are made to District 1 and 2, irrespective of ownership.

"The loading of tank cars for shipment from District 3 in full train lots.

"The common use of any idle truck capacity irrespective of ownership so that all trucks may be used with a maximum of efficiency and a minimum of idle time.

"The transfer of idle tank trucks from areas with surplus equipment to areas short of equipment.

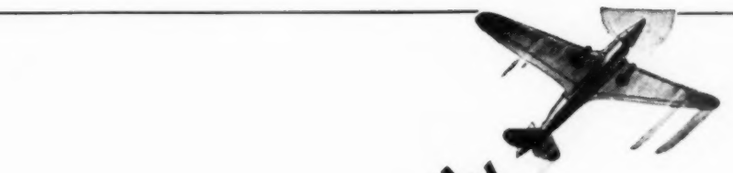
"The installation of truck-unloading facilities by each operator of a bulk plant not now so equipped.

"The loading and unloading of all transportation facilities on a 7-day per week, 24-hour per day, basis.

"The reduction of loading and unloading time at all refinery terminals by installing facilities wherever necessary.

"The common use of bulk plants, which receive petroleum products by barge, for local distribution by tank truck."

Members of District 3's Sup-



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plies and Distribution Subcommittee are:

C. B. Barrett, Houston, Texaco, chairman; T. M. Gordon, New Orleans, Louisiana Standard; A. F. Reed, El Dorado, Ark., Lion Oil Refining; R. W. Pack, Beaumont, Tex., Sun Pipe Line; G. L. Rowsey, Taylor, Tex., Taylor Refining Co.; J. H. Boyle, Tulsa, Hanlon-Buchanan; Clyde Alexander, Dallas, McCreslenn Oil Co.; D. P. Hamilton, Shreveport, Root Petroleum Co.; Raymond Tollett, Big Springs, Tex., Cosden Petroleum; R. H. Barnes, Port Arthur, Gulf, and A. A. Seeligson, San Antonio, Transwestern Oil Co.

ODT Studies Appointment of Committee For Atlantic Coast District Truckers

NPN News Bureau

WASHINGTON—Four major oil company representatives have been recommended for the proposed district advisory committee for petroleum transporters, to be appointed for Atlantic Seaboard area by Office of Defense Transportation, it was learned by NPN.

They are: J. F. Winchester, New York, of New Jersey Standard; F. P. Hufnagel, Philadelphia, of Sun; Gavin Laurie, Philadelphia, of Atlantic Refining; and T. L. Preble, New York, of Tide Water.

These four, together with the eight chairmen and vice-chairmen of the 4 regional committees in District 1, would constitute an overall advisory committee for the Atlantic Seaboard. Karl J. Eisenhardt, York, Pa., of Coastal Tank Lines, Inc., is acting chairman of the group.

Jobbers Represented

Oil jobbers are represented on the proposed Atlantic Seaboard advisory committee by L. A. Odom, Spartanburg, S. C., of Odom Oil Co., which operates its own transport tank trucks.

Mr. Odom is vice-chairman of Region 4 truckers' advisory committee. He is also president of the War Emergency Cooperative Assn., a common carrier trucking company set up to lease and operate "idle" tank trucks not operating a minimum of 130 hours weekly.

(For other members of proposed advisory committee and regional and state committees, see *NPN May 27 and June 3*).

ODT Suggests 'Policy' for Employers As Disputes Hamper Delivery Orders

NPN News Bureau

WASHINGTON — Labor controversies are delaying full compliance with general orders which curtail trucking operations to reduce mileage, Office of Defense Transportation acknowledged in enunciating a 5-point program to be followed by truckers confronted with worker disputes.

The "statement of policy" said the plan which will result in the least burden for employes should be adopted to comply with the order, and said savings realized under the orders should be used to protect workers from loss of jobs or earnings.

ODT said on June 6 that the labor disputes "are hampering the prompt and effective application of these orders", emphasizing its sole intent is to save rubber and trucks.

5 Points Outlined

"In drawing up specific plans for compliance with ODT orders," ODT added, "carriers are expected to co-operate with their employes where dislocation of employment is likely to be involved or where existing labor agreements are affected."

ODT outlined these 5 points "to hold labor controversies to a minimum, to insure fair treatment of employes and to achieve necessary conservation goals without delay":

1—All conservation plans must comply fully with the order.

2.—When a choice is to be made between feasible alternative plans, the plan should be adopted which will "result in the least burden on employes."

3—"Savings directly resulting from the application of an order should be used to afford employes reasonable protection against losses of earnings and jobs."

4—"Savings remaining after such provision has been made for employes should be passed on to consumers in the form of lower prices."

5—Plans formulated to comply with the orders should remain in effect only for the war's duration.

Local Appeal Boards Set Up by ODT

NPN News Bureau

WASHINGTON—Local appeal boards are being established by Office of Defense Transportation in 17 cities to pass upon applications for new trucks.

The local boards will take over the work of the special Washington Appeals Board which met weekly from April 7 to May 21 and considered nearly 1600 appeals from local allocation officers' decisions, upholding more than 80% of the decisions.

Local boards have been established in Boston, Philadelphia, Atlanta, Columbus, Ohio, Chicago, Nashville, Kansas City, Little Rock, Ft. Worth, Salt Lake City, Denver, Portland, San Francisco and Los Angeles. Others are being organized in New York, Minneapolis and Charlotte, N. C.

John A. Hassey (Cities Service), Boston, was named to the Boston board, and Gavin W. Laurie (Atlantic Refining), Philadelphia, was named to the Philadelphia board.

Port Advisory Groups Named by WPB

NPN News Bureau

WASHINGTON—Office of Defense transportation is setting up coastwise and intercoastal carriers' advisory committees, probably one for each major port, to advise ODT on port conditions, availability of equipment, and how it is handled.

Following committees have been appointed in last week:

Norfolk—L. G. Hogshire, Norfolk, Baltimore and Carolina Line, chairman; J. L. Hudgins, James River Oil Co.; J. D. Wood, Wood Towing Corp.; and C. G. Willis, North Carolina Line, Inc.

Portland—L. R. Gault, Western Transportation Co.; Capt. H. T. Shaver, Shaver Transportation Co.; Mark H. Beach, Columbia Basin River Operators; Wilbur J. Smith, Wilbur J. Smith Towing Co.; and F. O. Meyer, Knappton Towboat Co.

Seattle—Capt. Alex M. Peabody, Puget Sound Navigation Co., chairman; Harrison J. Hart, president of Puget Sound Tug and Barge Co.; and C. H. Carlander, president of Puget Sound Freight Lines.

O'Hara Named to ODT

NPN News Bureau

WASHINGTON — Jack O'Hara, San Jose, Calif., Pacific Truck Service, has been appointed motor truck consultant in Office of Defense Transportation's motor transport unit.

Great Lakes Loads 190 Trucks a Day

NPN News Bureau

TULSA—Completion of temporary truck loading facilities so that loadings were begun as early as May 25, when 18 trucks were handled at all terminals, is Great Lakes Pipe Line Co.'s answer to urgency created by Office of Petroleum Co-ordinator's Recommendation No. 33 and Office of Defense Transportation's Order No. 7, requiring truck use on hauls up to 100 miles from refinery, pipeline and water terminals effective June 1.

Great Lakes has set a 2500-gal. minimum on size of tank trucks it will permit to load at the terminals, according to an official.

Permanent facilities are expected to be completed by June 10, officials said, but no ceremonies are planned—it will just be "another day".

First day's loadings totaled 18 trucks from all 6 terminals, and this has gradually increased to current figure of 190. Based on past experience, officials know that won't be the maximum, and expect up to 400 or 500 in one day as soon as facilities are completed.

Ultimately switching 50% of the pipeline's gallonage from tank cars to trucks involves a lot of problems on everybody's part, officials explain. And about 933 tank cars are expected to be released for long-haul service through this move, trucks taking over the hauls up to 100 miles radius from each terminal.

Texas Refuses 10% Hike In Rail, Truck Rates

Special to NPN

AUSTIN — The Texas Railroad Commission has refused to approve a request for a 10% increase in freight rates on both railroads and truck lines for intrastate commerce. The Interstate Commerce Commission had already granted a similar increase on interstate hauling.

'Gas' Truck Insurance Rate Reduced in Texas

Special to NPN

AUSTIN—A 30 to 33% reduction in insurance rates on trucks carrying gasoline, butane, and explosives has been announced by J. P. Gibbs, Texas Casualty Insurance Commissioner.

The order, effective from June 1, removes the 50% surcharge for explosive hazard insurance on gasoline trucks of 1000 gallons or less capacity. This surcharge is reduced to 10% on larger trucks.

WPB Names Special 8-Man Committee To Study Pipelines, East's Oil Needs

NPN News Bureau

WASHINGTON—Construction of pipeline to feed the East Coast, and the general petroleum supply picture along the Atlantic seaboard are to be studied by a special committee representing members of the War Production Board.

Creation of the committee was announced June 4 by WPB Chairman Nelson, who said it "would also consult with the Maritime Commission and with the Office of Petroleum Co-ordinator in regard to recent pipeline recommendations made by the Petroleum Co-ordinator's office."

Johnson Is Chairman

Chairman of the committee is Wayne Johnson, Mr. Nelson's "special adviser on petroleum matters."

Mr. Johnson is a member of the New York law firm of Johnson and Shores. He also is a director of the Panama Railroad and a director of the Devoe and Raynolds Paint Co.

The committee, instructed to report its findings to WPB as soon as possible, is made up of:

Federal Loan Administrator Jesse Jones; Gen. W. B. Pyron, representing Secretary of War; Comdr. W. M. Callaghan, representing Secretary of the Navy; Isidor Lubin, representing Lend-Lease Administrator Harry L. Hopkins; Charles Rayner, representing Vice-President Henry A. Wallace; A. R. Glancey, representing Lt. Gen. William S. Knudsen; and Glennon Gilboy, representing Price Administrator Leon Henderson.

Mr. Glancey is chief of the Production Branch, Army Services of Supply, and Mr. Gilboy is a former professor of soil mechanics at Massachusetts Institute of Technology.

Rail Haul to East Down 43,570 Bbls.

NPN News Bureau

WASHINGTON — Crude and products hauled by rail to Eastern seaboard dropped to 664,230 bbls. daily during week ended May 30, compared with 706,800 bbls. daily previous week, Office of Petroleum Co-ordinator reported June 5.

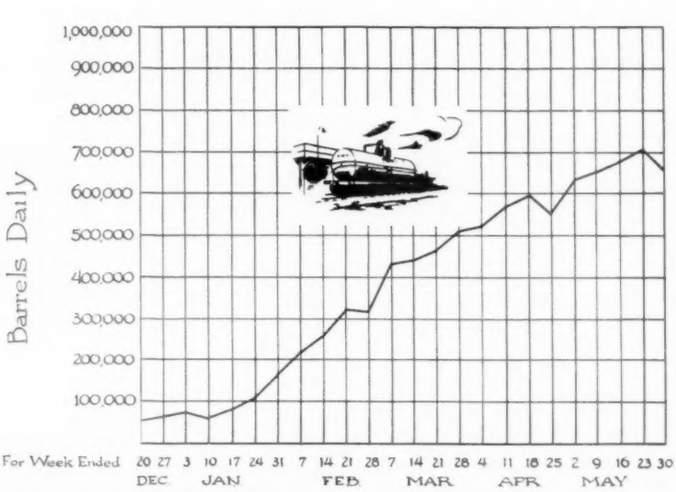
Contributing to the drop were Pennsylvania floods and inability of 2265 tank cars to return west for reloading, OPC said.

Northwestern movements also dropped — from 16,296 bbls. daily following week. However, this reflects the improved stock position in that area, OPC said.

Total of 22,141 tank cars were used in Eastern movement by 27 participating companies, who reported individual movements as follows:

Allied Oil, 31 cars; American Bituminuls, 96; Amsco, 73; Arkansas Fuel Oil, 200; Ashland Refining, 106; Asiatic Petroleum, 62; Atlantic Refining, 3029; James B. Berry Sons, 3; Chaimette Petroleum, 24; Cities Service, 905; Conoco, 274; Crown Central, 13; Gulf, 1927; Hartol, 22; Pan American, 1387; Petrol Corp., 527; Petroleum Heat & Power, 31; Pure Oil, 327; Shell, 722; Sinclair, 1956; Socony-Vacuum, 2560; Kentucky Standard, 23; New Jersey Standard, 4244; Ohio Standard, 34; Sun Oil, 1238; Texaco, 1734, and Tide Water, 593.

Northwest shipments were: Shell, 62 cars; California Standard, 49; Tide Water, 139, and Union Oil, 20.



A graphic illustration on the increasing tempo of tank car loadings of petroleum and products to East Coast during last 24 weeks

Floridan Urges Idle Barge Use To Supply East

NPN News Bureau

WASHINGTON — Stating that 3 steel and 42 wooden tugs and towboats and 5 steel and 65 wooden barges—all suitable for hauling petroleum products—were idle in Florida between May 18-23, Thomas A. Johnson, Florida's Petroleum Co-ordinator, today suggested to Senate Commerce's rivers and harbors subcommittee that some existing government agency be designated to handle the barge-tug situation with view to getting as many as possible into direct East Coast petroleum service.

Sen. Pepper, Florida, criticized Petroleum Co-ordinator Ickes for not putting "as much emphasis on barges as he has on pipelines", and suggested that if Mr. Ickes had given the barge situation more attention, oil would be flowing faster to East Coast.

Sen. Vandenberg, Michigan, read a letter on proposed Florida pipelines which he'd just received from Mr. Ickes.

OPC Plans 2 Lines

Mr. Ickes' letter said his office had 2 Florida pipelines under consideration. Both would run from Port St. Joe to Jacksonville and both would be 8-in. lines to be financed by RFC. Both would also use second-hand pipe.

American Liberty Pipe Line Co. is now seeking a $3,000,000 loan from RFC, Mr. Ickes' letter said, and he is informed this line can be built in 120 days. Sublick Oil Barge Co. is the other concern willing to build a pipeline. OPC's appraisal of this company's proposal is going to RFC "within a few days", Mr. Ickes said.

RFC is to decide which company to finance, Mr. Ickes explained, adding that "only one products line across Florida is justified at this time".

Both of these proposed lines would move an estimated 35,000 to 40,000 bbls. of products daily.

In stating that some existing government agency should have authority to direct use of all tugs, towboats and barges, Mr. Johnson said additional transportation costs of hauling petroleum products to East Coast by these means, should be a "minor consideration", in that fuels, particularly industrial fuels, are badly needed.

Mr. Johnson's figures on idle tugs, towboats and barges were taken from a survey he conducted between May 18-23.

Hearings resume June 10 when New York City's Mayor La Guardia is scheduled to testify.

Meanwhile, government agency which is to build wooden barges suitable for moving petroleum products, has not been designated, a reliable source told NPN, June 8.

Maritime Gets Barge Bids; Types Not Revealed

NPN News Bureau

WASHINGTON — Whether any of the wooden barges on which Maritime Commission received bids, June 1, will be constructed to carry crude or its products could not be learned, but a Maritime spokesman says he "understands there is a method for lining these barges to enable them to carry oil."

Presumably, this spokesman has reference to a rubber-like substance called "mareng" which has been used for years to line airplane gasoline tanks, and which the Office of Defense Transportation is still seeking cost data, with view to using it to line wooden barges.

Maritime Commission received 27 bids from 11 states for barge construction. No more than 5 barges will be built by any single contractor, so maximum number planned under this program would be 135 barges—if every bidder got a contract for 5 barges.

Susquehanna, Keystone Lines Reversed to Flow Eastward

NPN News Bureau

WASHINGTON — Susquehanna and Keystone pipelines have been reversed and are pumping gasoline and crude, respectively, eastward and the Tuscarora line is still in the process of being reversed to carry products to East Coast, an authoritative source told NPN June 8.

Keystone (Atlantic Refining) started pumping 20,000 bbls. daily of crude oil into Philadelphia about a week ago, it was said. Eventually Susquehanna (Sun) is to carry 15,000 bbls. daily of gasoline to East Coast.

Tuscarora (New Jersey Standard) is to move 20,000 bbls. daily of crude, but until sufficient quantities can be accumulated at its western terminus, it will carry products, it was said.

NPN's Washington Directory of Oil Agency Headquarters

Following is a partial list and directory of governmental agencies in Washington dealing with matters affecting the oil industry: (List is as accurate as possible but is only tentative as room and phone numbers are constantly changing.)

Abbreviations code: Rm for room; Ex for phone extension.

Office of Petroleum Coordinator

Interior Department (New Building) 18th and C. Sts., N. W., Phone REpublic 1820.

Receptionist
Mrs. Rosalie E. Reid, Rm 6635, Ex 3429-4820.

Co-ordinator
Harold L. Ickes, Rm 6156, Ex 5000.

Deputy Co-ordinator
Ralph K. Davies, Rm 6654, Ex 3831.

Assistant Deputy Co-ordinator
Robert E. Allen, Rm 6647, Ex 4401.
Elmer E. Batzell, assistant, Rm 6070, Ex 2181.
George A. Wilson, assistant, Rm 6642, Ex 4898.

Special Assistants
Gordon M. Sessions, Rm 7519, Ex 4446.
Howard T. Mather, Rm 6628, Ex 4626.
J. Elmer Thomas, Rm 7442, Ex 4735.

Executive Officer
Stanley W. Crosthwait, Rm 6415, Ex 4363.

WPB Priority Consultant
Robert B. Shirk, chief priority specialist, Rm 7340-42, Ex 4616-17.

Information Division
Herbert A. Yocom, director, Rm 7513-15, Ex 3844, 4650-3844.

Conservation Division
Everett Lee De Golyer, director, Rm 7514, Ex 4459.

Facility Security Division
W. D. Mason, director, Rm 3641, Ex 4172.

Foreign Division
James T. Duce, Rm 4442-40, Ex 4417.
Wm. D. Crampton, associate director, Rm 4448, Ex 4788.
C. S. Snodgrass, associate director, Rm 4450, Ex 2968.
Walter R. Lange, tanker co-ordinating expert, Tanker Co-ordinating Board, Rm 7512, Ex 4744-4437.

Legal Division
J. Howard Marshall, chief counsel, Rm 6649, Ex 4100.
Robert E. Friedman, associate chief counsel, Rm 6424, Ex 668.
David M. Hudson, associate chief counsel, Rm 6422, Ex 793.

Marketing Division
John W. Frey, director, Rm 4258, Ex 4646-7.
Paul A. Best, assistant director, Rm 4258, Ex 3518.
Joseph H. Ellender, chief of motor fuel section, Rm 4256, Ex 4434.
D. C. Arnold, head of asphalt section, Rm 4244, Ex 2787.
Ned F. Foulds, chief of fuel oils section, Rm 4457, Ex 4797.
Howard C. Cooper, chief of lube oils and miscellaneous products, Rm 4247, Ex 4313.

Materials Division
William F. Huff, director, Rm 7314, Ex 4585.

Petroleum Supply Division
Robert Lee Minckler, director, Rm 7452, Ex 4834.
R. C. Sauer, assistant director, Rm 7450, Ex 2083.

Production Division
Donald R. Knowlton, Rm 7410, Ex 4861.
Paul M. Raigorodsky, assistant director, Rm 7423, Ex 4774-2059.
Ralph J. Schilthuis, assistant director, Rm 7410, Ex 2907-4689.

Refining Division
Wright W. Gary, director, Rm 6637, Ex 3233-4644.
Robert B. Cragin, assistant director, Rm 3224, Ex 3237.
Phillip M. Robinson, assistant director, Rm 6644, Ex 4786-87.
Douglas P. Bailey, chief of operations section, Rm 3213, Ex 4877.
Max B. Miller, chief equipment procurement section, Rm 3546, Ex 4560.
George Parkhurst, chief of facilities section, Rm 3229, Ex 3941-3232.
C. R. Wagner, chief process development section, Rm 3210, Ex 4619.

Research Division
Edward B. Swanson, director, Rm 7315, Ex 649.
Oliver S. Ambrose, assistant director, Rm 7317, Ex 4777.

Transportation Division
Maj. J. R. Parten, director, Rm 6629, Ex 4418-3329.
R. B. McLaughlin, associate director, Rm 6629, Ex 3557.
Lee R. Cowles, assistant director, Rm 6623, Ex 3658.
Donald A. Sears, chief of pipeline section, Rm 6626, Ex 4833.
Boyd Wilson, chief of tank car section, Rm 6621, Ex 4620.
S. D. Archbold, chief of inland waterways section, Rm 6620, Ex 4333.
W. C. Eberle, chief of marine section, Rm 6622, Ex 4019.
Charles L. Lockett, chief of materials and equipment section, Rm 6624, Ex 4627-4754.
Arch Turner, chief of motor transportation section, Rm 6619, Ex 4300.

Liaison
Gen. Walter B. Pyron
Liaison agent between Army Department and OPC, Phone RE 6700, Ex 6044, Rm 3062, Munitions Bldg., Constitution Ave. between 19th and 21st Sts.

War Production Board

Petroleum Machinery section, Special Industry Machinery Branch—Temporary Bldg. E, 5th Wing—Third Floor, Phone REpublic 7500, Ex 3441.
A. E. Collins, chief, Ex 5741.
John W. Choates, refinery equipment, Ex 72615.
William L. Clark, production machinery, Ex 72615.
E. B. Miller, production and refining equipment, Ex 5751.
M. A. Willner, production and transportation, Ex 72615.

Oil Section—New Social Security Bldg., Rm 4613, Phone REpublic 7500.
Dr. Walter Whitman, petroleum consultant, Rm 3082, Railroad Retirement Bldg., 4th & C St., S. W., Ex 6310.
C. C. Monrad, assistant, Rm 3090 Railroad Retirement Bldg., 4th & C St., SW., Ex 2983.

Rubber Co-ordinator
Arthur B. Newhall, Rm 2300, Ex 4698.

Liaison, WPB-OPC-RFC
R. Otis McClintock, Rm 5193 A, Ex 71181.

Office of Price Administration

Temporary D Bldg., 4th and Independence Ave., Phone REpublic 7500.
Leon Henderson, administrator, Rm 46, Ex 5586.
Dr. J. K. Galbraith, staff deputy administrator, Rm 258, Ex 5203.
Dr. George W. Stocking, assistant administrator, fuel division, Rm 245, Ex 72519.
Harry R. Booth, chief counsel, fuel division, Rm 1604, Ex 6359.
George H. Goss, administrative officer petroleum section, Rm 236, Ex 5389.
George Doffing, price executive of petroleum section, Rm 236, Ex 5388.
Joseph H. Salmon, associate price executive, Rm 2530, Ex 6376.
Robert Collacott, head of refined products unit, Rm 2705, Ex 6636.
Edward W. Doherty, chief, economic analysis unit, Rm 2721, Ex 6370.
Peter Jensen, business specialist on lubes, fuel oils, asphalt, Rm 2709, Ex 4916.
Leo Van Herpe, chief of fuel section accounting division, Rm 2215. Ex 5539.
Watson B. Joyes, consultant in crude oil unit, Rm 2717, Ex 4403.
Joel Dean, handling gasoline rationing plans, Rm 1048, Temporary S Bldg., Ex 71322.

U. S. Tariff Commission

7th and F St., N.W., Phone NAtional 3947.

Petroleum Accounting Section
Kenneth L. Stone, chief, Rm 155, Ex 123.

Office of Defense Transportation

Interstate Commerce Commission Bldg., Constitution Ave. & 12th St., N. W. Phone REpublic 7500.
Joseph B. Eastman, director, Rm 5136, Ex 3527.
Fayette B. Dow, assistant on pipelines, tank cars, tankers and trucks, Rm 5132, Ex 3536.
J. G. Scott, counsel, Rm 5418, Ex 2460.

Motor Transport Division
John L. Rogers, director, Rm 4211, Ex 2297.
Sam F. Niness, chief of petroleum carrier section, Rm 4221, Labor Bldg., Ex 6351.
W. T. Cumming, chief of vehicle maintenance section, Rm 4211, Labor Bldg., Ex 72731.
T. L. Preble, consultant, vehicle maintenance section, Rm 4211, Labor Bldg., Ex 72731.
R. D. Thomas, chief of tire maintenance section, Rm 4215, Labor Bldg., Ex 2529.
H. H. Kelly, chief of allocation and materials section, Rm 4311 (Labor), Ex 72912.
Leon F. Banigan, assistant to Kelly, Rm 4311, Labor Bldg., Ex 3644.

Congress

Congressional Oil Investigating Committee
Rep. Wm. J. Cole, Jr., chairman, New House Office Bldg., Rm 1535, Ex 699.

Senate Oil Shortage Investigating Committee
Sen. Francis Maloney, chairman, Senate Office Bldg., Room 354, Ex 1196, Phone NAtional 3120.

Petroleum Industry War Council

William R. Boyd, Jr., chairman, Suite 700B Shoreham Hotel, Phone ADams 1926. Allan H. Hand, secretary-treasurer.

U. S. Maritime Commission

Commerce Department, Phone REpublic 6620.
B. B. Jennings, director of tanker operations, War Shipping Administration, Rm 4309, Ex 87, 88, 89.

Wartime Marketing Management

What the Nation's Oil Jobbers are Doing and Planning

As letters, samples of promotion material, manuals, charts and the like on the farm business continue to reach NPN, more than at any time in the past does it become evident that oil marketers selling to farmers are in a specialized end of the petroleum business where management plays an increasingly important role; where competition is the keenest, ingenuity at a premium and hard work an absolute necessity.

Among the programs of the larger selling organizations is that of a group of Mid-West independent refiners whose operations are carried on in 15 mid-western states as the Independent Refiners Service Corporation—"Sovereign Service". C. R. Sullivan, who is the guiding hand in the promotion of that organization's sales promotion activities, recently furnished NPN with a 32-page portfolio devoted exclusively to the farm trade. "Farmers Preferred," a new angle to an old market, is the theme of this promotion program.

In preparing the manual, the technique of service station operation has been converted into the operation of a bulk plant specializing in farm trade business.

For instance a followup system on farm customers, employing office record cards and mailing pieces, similar to that of any first class service station, has been developed. Instead of a record being kept on the customer's automobile, the card in addition to the car make and model also keeps track of trucks, tractors and other machinery.

Products Listed

The card lists the various products sold to the farm, the annual use and the service interval. In addition, the type of storage and the capacity is also shown. The bulk plant operator by studying these record cards can tell when the farmer will be in the market for the various products, and inform the salesman, or truck driver. Items on the card, in addition to blank spaces for additional products are:

Gasoline	Flushing oil
Naphtha	Harness oil
Solvent	Separator oil
Kerosine	Household oil
Distillate	Spray
Fuel	Sheep dip
Tractor fuel	Floor oil
Lube oil	Tires
Gear lube	Batteries
Grease	Anti-freeze

The cards serve as a prospect file, as well as a record on regular customers.

In order to secure names of prospects, the bulk plant operator makes a chart or buys a county map. This map is divided into sections and the location of prospects or customers are marked with numerals accounts to routes. For instance, Bill Jones, No. 1, H-12, Fred Smith, No. 2, H-17 and so on.

Survey Sales Area

Recommendation is made that a survey in detail of the area covered by the bulk plant be made. This is to cover the number of farms and farmers, passenger cars, trucks and tractors in the area. The plant operator is told that he can get the information from the Bureau of Agriculture Economics, Washington, D. C., and from the motor vehicle division or gas tax division of his state. These figures are to be used in setting up quotas.

Plant operators are told that a good yardstick for the quota would be the policy of one major oil company which makes it a policy to demand of their agents a 60 to 40 ratio; i.e., consumer business to dealer accounts.

Servicing Adds Profits

It is pointed out that in addition to the better than $200 which is spent annually in providing fuel and lubrication for tractors, the market for tractor servicing offers an equally attractive possibility. To give an idea of the great extra-profit-possibilities, a suggested service ticket is shown. This ticket, it is stated, lists the services and charges used by one operator.

The ticket reads:

Pick up tractor	$1.00
Clean and paint tractor (includes scrubbing with kerosine)	$12.00
Change Gear Grease (7 gallons @ 75c)	$5.25
Repack front wheels (50c each)	$1.00
New set of wiring	$1.50
New Oil Filter cartridge	(?)*
Change crankcase oil	(?)*
New Fan Belt	(?)*
Clean and flush cooling system	(?)*
Deliver tractor	$1.00

REMEMBER—PARTS AND REPAIRS ARE EXTRA

*Charges vary with sizes and capacity.

Many good merchandising ideas for going after and handling farm business are given. It is pointed out that the farmer of today is far different from the "hayseed" of former years; that he is sensible, logical-thinking businessman, and that it is important to keep this fact in mind when dealing with him, in any business transaction.

'Talk His Language'

The would-be farmer salesman is further cautioned to remember that farm operation is highly specialized and that the salesman should become familiar with farm needs, as well as farmers interests. "Talk his language," the manual states.

If it is necessary, go out and chop his wood to get the gasoline business, the salesman is told.

Among services offered is equipping trucks with an air tank. One bulk plant operator in Iowa it is said equipped his truck with an air tank holding a pressure of 250 lbs. Thus he is equipped to inflate soft tires where he finds them. The report states that a local welder built the tank, and its total cost including valves and hose was $30.00, quickly recovered by additional sales.

Advertising Ideas

Another possibility of service is painting of refillable drums. This work is done as the tank wagon driver makes his rounds. He calls on the farmer and makes a sale and during his visit asks permission to clean and paint the drums. While he is at it, he also stencils his name and phone number in a conspicuous spot on the drum.

Another successful operator, the manual states, uses chewing gum bearing his ad as a means of gaining favor with rural patrons. Others use various gadgets, such as pencils.

Furnishing the farmer with an inventory form to keep track of his property, has been found to be a good will builder. It may be only a record of machinery on a given property, or it may be a record of all physical assets.

It has been found that use of a printed bulk price table form inspires more confidence in the accuracy of delivery tickets. It is said that the purchaser feels that someone besides the tank wagon driver has figured the amount and he does not doubt its authenticity.

Another suggestion is that the tank wagon driver carry with him a blow torch and soldering iron, to solder holes in farm buckets, cans and the like.

Another thought given is about an oil jobber who instituted a windmill service. This jobber asks for the privilege of inspecting the mill, and during the inspection he lubricates it. He also checks the mill for needed repairs and takes the order for the material. In his case there is no windmill representative in his town, so he stocks a few parts and orders others as needed.

Lighting Plant Services

Setting up a service department for helping with farm lighting problems is also recommended. The section devoted to this states that the tank wagon driver who calls on the farmer at regular intervals, selling him fuel for his farm lighting plant or lubricants for his wind charger, is the logical person to render this service.

Rebuilding batteries, filling them with distilled water or supplying a bearing or brush for the generator is rather a simple task for one who knows how. It is easily learned and opens the way for additional sales of petroleum products, it is said.

Booking future business is pointed

out as another profitable activity. But those doing it are cautioned to be careful that contracts are not made that cannot be fulfilled. It is entirely possible that a "governmental freeze" might prohibit delivery of a certain product. The following clause is recommended as part of every future order:

"The delivery of this order is subject to strikes, acts of God, riots, warfare, government laws or regulations, and conditions beyond the control of the seller."

The Sovereign sales manual ends with this final punch:

The story in a nutshell is:

Friendly interest, plus planned salesmanship, plus thoughtful merchandising results in real profits from the farm market.

Eastern Jobbers Seek Lower Rent, New Lines as 'Gas' Sales Drop

By NPN Staff Writer

"Out of Gas" . . .

"Closed for Memorial Day" . . .

"Sorry Our Quota is Gone" . . .

"Gas Sold 8 a. m. to 8 p. m.—Open 24 Hours for Other Services" . . .

These signs at service stations were writing a unique history for the oil industry on the East Coast as wartime gasoline rationing last week twisted the usual holiday impetus to the machine age into a bleak picture of dry tanks and near-empty highways.

The first Memorial day since the last war found East Coast oil marketers looking at a picture that would have been called fantastic two years ago. It found most of the East in the midst of a "gasoline famine".

There was "heavy traffic" over the holiday—compared with any time since rationing started. But it was a mere fraction of previous years, with most drivers on very short trips to nearby resorts, or to cemeteries. License tags from distant states were seldom seen. Traffic on George Washington Bridge and Hudson Tunnel leading to New York was reported 50% below that of last year. A state trooper observed that traffic around Newport, R. I., would have brought "joy to Harold Ickes' heart".

At one state bathing beach, 43 cars were counted in a lot built to accommodate more than 4000.

Many bicycles were reported "scorching over the roads", and one observer told of seeing a man riding a burro.

Motorists Stranded

Rhode Island reported at least 50 motorists stranded on its highways. Most of these came from distant points to visit relatives at a Naval training station. Stranded motorists near Newport appealed to the police and were told that no gasoline was obtainable. They simply had to wait until Monday when stations received the first 1/3 of their June quotas.

Many dealers, winding up their first 15 days under the more severe 50% cut in deliveries, had used up their gasoline quotas before the holiday. Estimates of the number of stations out of gasoline before the end of the month ranged from 60% to 80%.

In Springfield, Mass., Memorial day found three quarters of all pumps dry. A Memorial Day parade there was a strictly "walking affair." Few cars were parked in or around the parade area, though the streets were lined with thousands of watchers. When it was over, there was much foot traffic in every direction, and busses and street cars were filled.

In Worcester, Mass., there was the same story. The town was filled with people, but they were walking, riding street cars or busses.

Stations Close Up

In Albany, N. Y., Memorial day eve found most of the smaller stations closed. When a station ran out of gasoline, the operator would simply lock up, put up a sign and go home. The same was true in Syracuse, and most of the cities and small towns. Some few rural stations throughout New York and New England remained open.

The few stations in urban areas that were open were doing a brisk business. With operators there was much talk of "chiseling" by the other fellow, and it was a quite common remark with the public that "if you knew a filling

Have you lost
YOUR VIKING SERVICE MANUAL?
YOUR VIKING CLUTCH ADJUSTMENT INSTRUCTIONS?
YOUR VIKING RELIEF-VALVE-IN-HEAD INSTRUCTIONS?
YOUR VIKING TRUCK MOUNTING PUMP INSTRUCTIONS?

ALL these offer you tested and valuable suggestions which, if followed, will enable you to get many more years of service out of your pumping equipment.

It will pay you to "brush up" on proper care of your Viking Rotary Pumps. Take time to again read service instructions listed above. If any of these have been lost or mislaid, write us and we will be glad to send them to you promptly and without charge.

VIKING PUMPS — FIRST IN AMERICA

VIKING Pump COMPANY
CEDAR FALLS, IOWA

station man" you could get all you wanted. But this writer was unable to see any evidence of chiseling.

At one station, in 20 minutes, some 8 cars were serviced. The sales usually were not in 3 gal. units, though the coupons were always detached for the higher amount. For instance, a 13 gal. sale called for 5 coupons, and the driver wasted 2 gal. The general attitude of the buyer seemed to be "what the heck", I'll get more coupons when these are gone.

Operators reported that simply displaying anything extra to go on a car, or anything to help it run, would bring sales without much effort. Overhead lubricant was an example pointed out at one station. Formerly little, if any, was sold. Since it has been attractively displayed, 3 out of every 10 customers were buying it.

The main "squawk" of station operators, which opinion is shared by most jobbers, is the system whereby stations open less than a year ago are given a quota based on estimated potential of the station. As one jobber points out, "who can prove that any quota is too high?"

But so far as complaints generally of operators, those in the stations are taking the situation as it is laid down to them and making the best of it.

Search for New Items

It is too soon for many additional lines to be added since the 50% ration started. But with few exceptions, both the operators of the stations and their supplying jobbers are scouting around for new items to sell—even those individuals that never wanted to have anything to do with additional lines in the past.

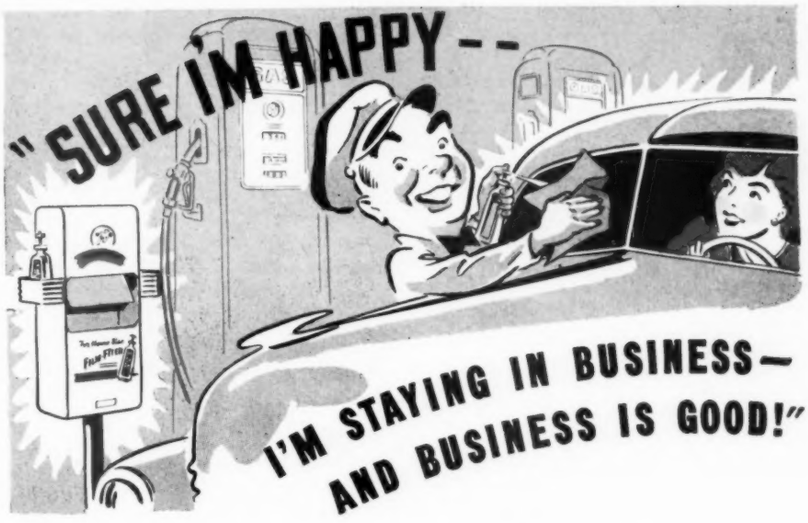
One chain operator is selling anthracite coal in 50-lb. bags. This marketer found that there was a good market for this, both among individuals who can't buy more at a time and among people who for various reasons want a little to tide them over until a coal delivery is made. As high as a ton a day is reported sold at one outlet.

There is little indication of many jobbers getting into lines very far removed from their own business, such as groceries. Their opinion is that other business has been hit the same as the oil business, and that it is better to stay out of lines about which nothing is known.

Housekeeping Varies

Housekeeping conditions in the rationed area range anywhere from terrible to good. But good housekeeping has certainly not been pitched out of the window. Less business gives more time for cleaning up, but as an Elizabeth, N. J. jobber points out, the days when two men grabbed for the same broom when the boss drove in are gone.

How independent oil company management feels about the housekeeping question under ration restrictions is illustrated by the experience of J. L. Rieley, Sales Manager of Kallaher & Mee Co., Pawtucket, R. I. He told of an operator whose station was so dirty



"I was plenty worried when I read how tire rationing would take cars off the road. Then, after I thought about it awhile, I felt better. 'Sure,' I said to myself, 'there'll be a lot of the boys closin' up shop —but I don't have to be one of them!'

"Rationing or no rationing, there'll still be plenty of cars running, and they'll have to be serviced somewhere. Because people will be choosier than ever, the man who gets the business will be the one who takes really good care of them — who gives them better, more satisfactory service.

"So—I started to spruce up my service — looked around for ideas that would help me do a better job. I'd read about FILM-FITER WINDSHIELD SERVICE and I sent for information about it. Now —I'm cleaning windshields the RIGHT way — FILM-FITER has made a hit with my old customers and is bringing me new ones. I'm getting more than my share of the business, and I figure my chances for the future are a lot better than the other fellow's."

FILM-FITER SERVICE IS *COMPLETE*

It combines a new film-removing liquid cleaner, chemically treated paper *Windshield Wipes, and a weatherproof dispenser and waste receptacle for the entire service. This combination cuts traffic film, scum and dirt — leaves glass clear and clean. There's no oily smear to hamper vision in wet weather when you've used FILM-FITER. More and more drivers are looking for the FILM-FITER Cabinet — the sign of the station with really good service.

*Manufactured of Mosinee sulphate by the makers of Mosinee Dubltowls.

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FILM-FITER DIVISION

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WRITE FOR FULL PARTICULARS

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that in times past, he would have gotten rid of him immediately. But now he drops in personally on the operator frequently and gets results by doing a good selling job on reasons why stations should be kept clean.

That company is doing a good job of keeping operators in its some sixty-odd outlets. One of the plans is to lease an operator two stations in the same vicinity, the operator dividing his time between the two with the aid of a helper. Gasoline is placed in the stations on a consignment basis—1% being allowed for shrinkage—and collection made once a week. All other merchandise is sold on a cash basis. A cash bond of approximately one week's gasoline supply is all that is required to get in the station. Very little difficulty has been experienced in getting desirable older men, or those with minor physical handicaps, who have a little money and want to get in business for themselves.

Rent Cuts Sought

Jobber management's greatest activity in the rationed area since the start of the 50% quota is in connection with leases. One of the first jobbers to start on a rent reduction program was Edward Shiner, who operates under the name of Connecticut Refining Co. Mr. Shiner informed this writer that he had been successful in getting a 20% rent reduction on 99 out of some 100 stations. The job was done by simply going to the property owners and putting the entire picture on the table.

Twenty and 25% is about the average amount of reduction being asked of landlords, though some are asking for as much as 50%.

Another company having success in getting a reasonable rent reduction is the Phillips Oil Co., Passaic, N. J. Mr. G. Willard Phillips, vice-president of that company is taking his landlords, one by one, and explaining the situation to them. Each individual case is handled separately. The fact is pointed out to the landlord that unless a reduction permitting operations is made, it will be necessary to cancel the lease.

Harry E. Hellmund, Hellmund Oil Co., Hillside, N. J., says "What we are interested in most is what the government intends to do about service station rents which have not been decreased, although they have taken the gallonage away". Mr. Hellmund believes that some kind of adjustment or arrangement will have to be made where rents will be scaled down to meet decreased gallonage.

Varying decreases in overall income are reported by marketers. These run from 20% to as much as 60%, with about 30% as the average up to now.

Reduction in expenses, as a result of smaller payroll, less light, delivery, and other expenses, averages only about 7%. Fuel oil marketers, particularly, have been hit with additional delivery expense because of rationing regulations on fuel oil deliveries. The present arrangement necessitates more frequent deliveries in supplying only half of last year's purchases each month. The general belief is that jobbers should be permitted to make up to 50% of last year's total purchases any way they see fit just as long as they do not deliver more than the customer is entitled to.

Lamson Oil Corp., Providence, R. I., one of the largest fuel oil distributors in the state and New England, has a delivery cost of .59c, whereas it formerly had a delivery cost of .30c, according to R. T. Westmoreland, secretary-treasurer. Mr. Westmoreland voices the opinion of all fuel oil distributors talked to by pointing out that as a rubber conservation move, for the oil company, 50% rationing under the present system actually increases the use of rubber rather than decreases it.

Response Good—But Not Good Enough In Oil's Scrap Drive, P.I.W.C. Told

WASHINGTON—The oil industry's scrap collection drive as a whole has been encouraging, M. R. Singleton, salvage director of petroleum industry, industrial salvage section of Bureau of Conservation, told the Petroleum Industry War Council meeting here on June 3.

Some individual companies alone will have shipped 15,000 to 40,000 tons of scrap metal to the steel mills through demolition programs, he said, and yet there are some large companies who simply report—"we have no scrap metal available".

Mr. Singleton lauded the work Charles Roeser and George Gibbons were doing in collecting scrap through the Texas Mid-Continent Gas and Oil Assn., and the organization of a salvage committee in California (*NPN June 3, p. 35*) with Paul Shoup as chairman.

"The oil industry scrap delivery since Feb. 15, 1942 is reported as follows: 221,992 tons of iron and steel and 10,766 tons of nonferrous metals. Through lack of reports from some companies moving scrap, the above figures only cover scrap that has actually been reported by the individual oil companies. George Gibbons estimates that we are getting reports on only about 65% of the oil industry scrap that is actually collected and moved to the mills. Taking this as a basis we would then have 335,000 tons of iron and steel and 16,000 tons of nonferrous metals as the scrap movement from the oil industry.

Over-all Situation Bad

"But let us take a look at the over-all U. S. picture. On April 1, 1941 we had an inventory of 7,250,000 tons of iron and steel scrap. On April 1, 1942 we had an inventory of slightly more than 4 million tons, a drop in inventory

within one year of 3,250,000 tons or about 45%.

"Our monthly consumption today is 4,550,000 tons, which will be increased by new construction to be completed by Dec. 31, 1942 to 4,716,666 tons per month. Remember our inventory on April 1, 1942 was about 4 million tons.

"This we know—we have less than a 30-day inventory of scrap iron and steel (unprepared scrap included). If the rate of flow of scrap metals remains constant, a critical situation has developed that must and will have the attention of every intelligent citizen.

"Will you gentlemen help solve the following question?

Asks Check of Well Equipment

"In searching further for additional scrap supplies it has been suggested that there are many oil well pumping derricks standing in fields where it is perfectly possible to operate without derricks and that such derricks might be considered as a potential source of steel scrap. We are considering, of course, only derricks on pumping wells used mainly in connection with running tubing and rods in and out of the wells.

"At the present time these jobs are being done either by pumping engines permanently installed at the well, which is the case in many of the older deep wells in Oklahoma, or by truck-drawn pulling units which go from well to well.

"On many of the shallower wells it would be perfectly possible to replace derricks with a mast, either erected in place or forming a part of the portable pulling unit. In the case of the deeper wells it would undoubtedly be necessary to use a combination derrick and pulling unit, such as is used ordinarily in the East Texas fields. Isolated deep wells would probably require the present derrick.

"While it would be necessary, therefore, to allow derricks to remain on small isolated leases with deep wells, is it not feasible to salvage a large number of derricks for the production of steel scrap?

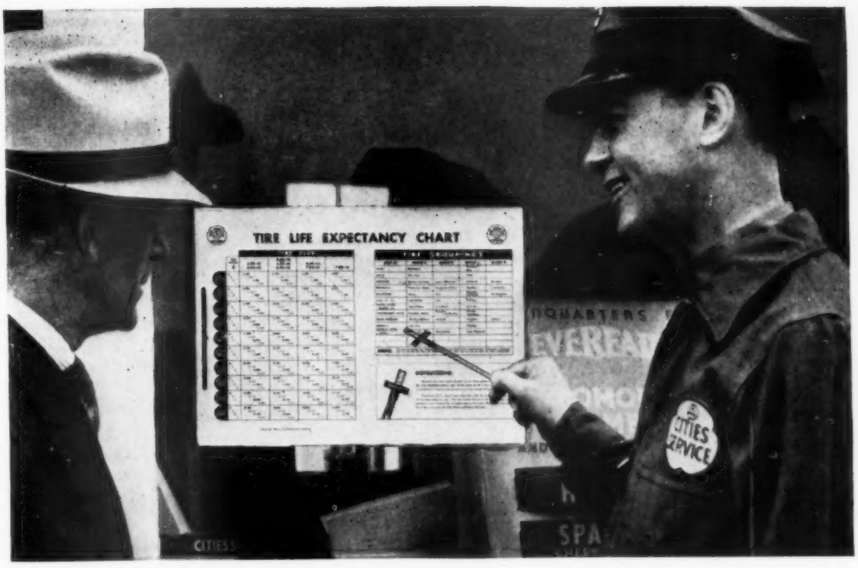
Derrick Scrap Figures

It is impossible, of course, without adequate data to give any exact figures on the amount of scrap that might be recovered or the additional pulling units that might have to be provided, but as an indication of the scrap available, we quote the following very approximate figures:

	Derricks	Tons of Steel
Oklahoma	15,900	112,000
Kansas	11,800	101,200
North Texas & Panhandle	3,800	25,000
East Texas	10,000	65,000
TOTAL	41,500	303,200

"No figures are available for the West Coast but substantial quantities might be recovered in many of the West Coast fields, such as Signal Hill, Kettleman Hills, etc.

"Will you have your producing organization institute and give me the result of a survey of your producing



NOW YOU CAN PREDICT HOW MANY MILES ARE LEFT IN A TIRE!

A Cities Service "exclusive" that gives you *the right answer!*

It's new, it's simple, it's reliable. You don't have to be a magician or a mathematician to tell your customers just about how much life remains in their tires.

All you need are two things. First, the Cities Service tire gauge —a special gauge which measures depth of tire tread in 32nds of an inch. And second, the Tire Life Expectancy Chart from which to get the mileage reading. *By measuring the tread depth and consulting the Chart,* you can predict approximately how many miles of service remain in the tire.

Most motorists believe their tires will wear out long before the time indicated by expert opinion. Now, with this service, you can relieve their fears by saying, for instance: "Mr. Smith, according to the depth of the tread on your tires, and assuming that you will follow our 7-point conservation plan, you can expect approximately 20,000 more miles of service."

Here, then, is a real benefit you can render to your customers — a friendly service that will keep them calling on you, again and again.

And remember, only Cities Service dealers can offer this unique service.

CITIES SERVICE OILS — ONCE-ALWAYS

CITIES SERVICE OIL COMPANIES

NEW YORK — CHICAGO — SHREVEPORT

OIL IS AMMUNITION—USE IT WISELY!

properties to determine more or less exactly what salvage could be accomplished? It would be too time-consuming to make a complete study at the present time of the results that might be achieved by salvaging all of the derricks in the United States, replacing them with portable units.

Recovery Cost Not Available

"No definite estimates have been prepared to indicate the cost of recovering this type of scrap. Undoubtedly some portions would be relatively high but it would vary in the several areas and the cost of scrap at the mill would depend on this cost as well as freight rates from these more or less remote points. A more definite idea could, of course, be obtained in the surveys suggested.

"I have heard complaints of the overlapping of governmental agency activities in the collection of scrap; that some of you have been annoyed by requests for reports and by the over-lapping just mentioned. Well every business and every individual has been affected by the war but many feel that they should not be disturbed because they have so much on their minds: to those gentlemen I would like to repeat something that Mr. Ralph Davies wrote in an article not long ago. It was to the effect that the bombs that fell on Pearl Harbor and Shanghai did in effect also fall on Denver, Houston, New York, San Francisco, Kansas City, and the dislocation of business was just as great as if the bombs had fallen on their places of business. Every business and every industry has been likewise affected.

"I know the oil industry today is carrying a great burden but because of its great consumption of metals, naturally that industry must be looked to to produce tremendous quantities of scrap. . . .

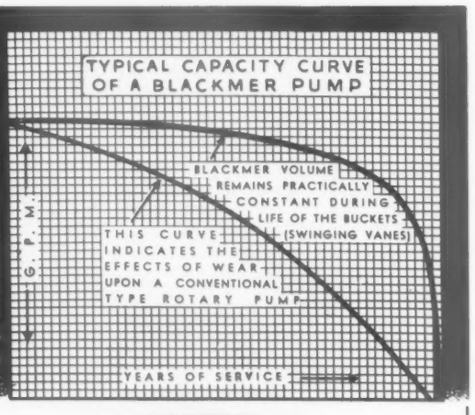
Urges Action Before Winter

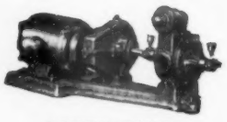
"You have the best possible opportunity to do your job between now and late fall when we may expect weather conditions that will retard the work of scrap collection and demolition to some degree. During this period it is an absolute necessity that a stock pile of scrap metals be built up.

"The attitude of the oil industry executives with whom I have discussed this matter has made me feel very thankful that people like that are the leaders in our industry. The attitude of the small operators is even more heartening for they have not the great organization that the larger companies have to work with but many of them are doing a splendid job. But enough has not been done.

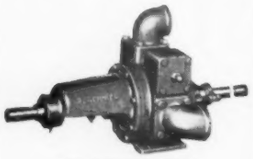
"The vital factor in this situation is speed and the necessity is great and immediate."

What would this longer Pump-life Mean to Your PUMPING COSTS?


TYPICAL CAPACITY CURVE OF A BLACKMER PUMP
BLACKMER VOLUME REMAINS PRACTICALLY CONSTANT DURING LIFE OF THE BUCKETS (SWINGING VANES)
THIS CURVE INDICATES THE EFFECTS OF WEAR UPON A CONVENTIONAL TYPE ROTARY PUMP
G.P.M.
YEARS OF SERVICE



POWER PUMPS
5 to 700 GPM. Pressures to 300 psi. All standard drives.



TRUCK PUMPS
50-90 GPM. Power take-off or gasoline engine drive.

HAND PUMPS
54 Models

THE PUMP THAT IS SELF-ADJUSTING FOR WEAR
FAMOUS BUCKET DESIGN

BLACKMER
· ROTARY ·
PUMPS

It is cheaper to buy four buckets than to buy a new pump.

Send for Pump Maintenance Check List—No. SER-1:—"10 WAYS TO MAKE A ROTARY PUMP LAST LONGER".

Free to bulk plant operators.

BLACKMER PUMP COMPANY

1886 Century Avenue, S. W., Grand Rapids, Michigan

P.I.W.C. Proposes Plan To Keep Cars on Road

(*Continued from page* 22)

by the following calculations used in the report:

Unit	Crude Rubber	Reclaimed Rubber
Casing	2.85 oz.	17.68 lbs.
Recap	1.89 oz.	4.80 lbs.
Tube	11.00 oz.	1.06 lbs.

Due to recent technological advances in tire manufacture and recapping material from reclaimed rubber, it is now possible to reduce the crude rubber content "to a mere trace used in cementing the tread to the carcass", the P.I.W.C. report said.

Under the assumption that 60% of existing tires could be recapped and that 60% of these tires could be recapped again, the total number of recaps is approximately 130,000,000. This was distributed over the 6-year period (1942-1948) so that the peak in recapping would be reached in 1943. Approximately 80,000,000 tubes were distributed in proportion to the number of recaps.

Need for Speed Cited

In its report, the P.I.W.C. emphasized that results of the program could be realized only if there was prompt action. Lapse of a few months may permit a degree of tire wear which could not be overcome by the contemplated steps.

Report was prepared by the advisory subcommittee on rubber economics, headed by Dr. Joseph E. Pogue. Other members are W. C. Allen, C. L. Burrill, W. L. Finger, R. S. Mitchell, L. W. Moore and George H. Taber, Jr. It was submitted to the war council's special committee on synthetic rubber, of which W.S.S. Rodgers (Texaco) is chairman. Report was adopted by the war council at its June 2 meeting.

Following is the P.I.W.C. committee's report on rubber now on wheels:

Civilian Inventory of Rubber

Calculations indicate that usable passenger cars can be maintained on the road by means of conservation and the expenditure of a moderate tonnage of rubber, almost entirely reclaimed. If this rubber can be largely provided from the inventory in the hands of the passenger car user or available to him, especially if much of this inventory would otherwise be unrecoverable, the desirability of an organized effort to this end becomes clearly evident.

Tires and tubes have an average life of three years, but only a small portion of their rubber content has been consumed at the time of mechanical failure, and most of the remainder can be reclaimed. Worn tire treads can usually be recapped once or twice and thereafter a substantial percentage of the rubber in the scrapped casing and tube can be reclaimed once or twice to make recapping material or new tires and tubes. To a considerable degree this procedure could become almost self-sustaining over a period of several years.

There is on existing passenger cars a rolling inventory of rubber of more than a million tons. As tires and tubes on operating units wear out, and as cars themselves are junked for mechanical failure, considerable rubber is released which can be reclaimed and used for servicing the remaining cars. The tonnage of rubber thus made available will fall short of that required for the maintenance of all usable cars on

the road, although it exceeds the quantities needed for recapping existing tires. Therefore, Curve 3 in Figure 1 can be attained without recourse to the existing supplies of scrap. A little natural rubber is also necessary to produce tires and tubes of acceptable quality, and for cementing recaps to worn treads, but this tonnage is almost negligible in comparison with the urgency of the need it fulfills.

To develop Curve 4 in Figure 1 would require reclaimed rubber in addition to that provided by the current discards from cars and therefore the existing supplies of scrap would have to be drawn upon to some extent. A large stock of scrap is represented by the accumulation of discarded tires scattered throughout the country. The size of this automotive stock pile can be measured roughly by assuming that tires made in the past three years are still in use, but those manufactured in the preceding five years have been discarded. If from the calculated tonnage of these discards is deducted the scrap consumed in reclamation plants and half of the remainder is regarded as collectible, the resulting tonnage along with present inventories and future scrap supplies is adequate to keep existing reclaiming facilities in full operation for several years, not counting in other sources of scrap and possible imports from other countries.

Reclamation plants in the United States have a capacity of around 320,000 long tons per year and require approximately 380,000 tons of scrap as their raw material. The calculations in this report indicate that in order to supply the reclaimed rubber needed to keep all usable passenger cars on the road, only 20 per cent of the total reclaiming capacity would be required the first year, 35 per cent, the second; and 50 per cent, the third; with higher proportions thereafter. Accordingly, our reclamation capacity, for three years at least, could still be devoted in the main to the uses for which the output is now allocated. Moreover, scrap collection so far in 1942 has been substantially less than that required for full operation of reclamation plants, so that if the part of the civilian inventory not now flowing to reclamation plants could be induced in that direction by a system of cycling, then the passenger car could get its needs supplied for several years from scrap not *now* being utilized.

Philadelphia Oil Men Golf

Special to NPN

PHILADELPHIA—Seventy-five members and guests of the Oil Trade Assn. of Philadelphia played golf and 110 attended the dinner which concluded the association's spring golf meeting at Philadelphia Country Club on June 2, according to J.N.D. Harris, chairman of publicity committee.

Wartime spirit was incorporated into the meeting when defense stamps were given as prizes for the various events.

Florida Pipeline, Canal May Reach House Floor

NPN News Bureau

WASHINGTON—Mansfield bill, calling for a pipeline and barge canal across Florida along with improvement of Gulf Intracoastal Waterway may reach House floor again during week of June 8.

Rep. Joseph Mansfield, Texas sponsor of the bill, said he expected the bill to come up some time during the week. A few days before, the House refused to consider the bill under a suspension of rules which would block floor amendments except through Rep. Mansfield who is chairman of House Rivers and Harbors Committee. Consideration under an open rule would throw the bill open to floor amendment.

A SPECIAL "TRUCK-SAVING SERVICE"

For FIGHTERS ON THE HOME FRONT

GMC VICTORY MAINTENANCE KEEPS YOUR TRUCK ON THE JOB

The Army calls truck servicing "Motor Maintenance." GMC calls its war-time service program "Victory Maintenance." Both are important because commercial trucks that work behind the lines hauling food, merchandise or war materials are as vital to victory as Army trucks that pull guns or transport troops. Your nearest GMC dealer will be glad to show you how "Victory Maintenance" can prolong the life of your truck . . . increase its economy . . . restore its performance . . . keep it "pulling for victory" for the duration!

Special "Service Payment Plan" available through our own YMAC

THE TRUCK OF VALUE

GMC TRUCKS

GASOLINE-DIESEL

GENERAL AMERICAN TANK STORAGE TERMINALS
A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION
GENERAL OFFICE
135 SOUTH LA SALLE STREET, CHICAGO, ILL.
ORIGINAL
No.
Negotiable Public Warehouse Receipt
RECEIVED for storage in storage tanks hereinafter designated, located at
the following commodity or commodities
of the quantity, description and grade as follows:
Quantity
Commodity
Storage Tank No.
Extent of ownership of General American Transportation Corporation
General American Transportation Corporation claims and shall have a lien upon the material at any time stored in said storage tanks for all storage charges, loading and unloading charges and all other charges in connection with the use of said storage tanks.
The rate of storage charges on said property is
cents per
for
and thereafter the rate is
Included in above rate the following services will be performed by the General American Transportation Corporation where so inserted in this receipt or at an additional charge as enumerated herein:
Unloading
Loading
SPECIMEN
The above mentioned charges do not cover insurance or any other services on the part of the General American Transportation Corporation. Storage charges are payable at the time of withdrawals of property if stored for one month or less. If stored longer than one month, charges are payable monthly, and final charges at time of withdrawals.
The property described in this receipt will be delivered to the order of said
upon surrender of this receipt properly endorsed on the back hereof and the payment of all charges accrued thereon.
The property described in this receipt, when such loss or damage is caused in whole or in part by an act of God, or the public enemy or by riots, strikes or other causes beyond the control of the General American Transportation Corporation, and shall be liable only for loss or damage caused by its failure to
to be signed and delivered
IN TESTIMONY

EXTRA ROOM WHEN YOU NEED IT

Not only do General American Terminals provide needed storage space for your bulk liquids—they also make extra capital available. A General American Warehouse Receipt is accepted as finest collateral for financing. Enjoy every modern safeguard, every unique economy of this strategic network, without any investment on your part. It's good business, particularly in war time, to check your storage problems with General American—*now.*

ONLY GENERAL AMERICAN GIVES ALL THESE ADVANTAGES:

1. *RELIABLE CUSTODIANSHIP.* Our warehouse receipts are highest type of collateral everywhere.
2. *MODERN PROTECTION.* Latest safety appliances; lowest insurance rates; minimum evaporation losses.
3. *INDEPENDENT OWNERSHIP.* Strictest privacy. We do not buy, sell or refine any oils.
4. *NO WHARFAGE.* There is no wharfage charge at our own private docks.
5. *SPEED WITH SAFETY.* Day and night crews, complete facilities, eliminate all shipping delays.
6. *LARGE TANK CAR FLEET.* Now working night and day, delivering essentials of war.
7. *NO CONTAMINATION.* Separate pumps, lines, storage zones for dissimilar commodities.

KEEP 'EM ROLLING! Freight cars—particularly tank cars—are vital to Victory. They must be loaded, unloaded, kept moving with all possible speed. Delays may cost lives!

GATX GENERAL AMERICAN

GENERAL AMERICAN TANK STORAGE TERMINALS

GOODHOPE and WESTWEGO, LA. (Port of New Orleans)
CARTERET, NEW JERSEY (Port of New York)
CORPUS CHRISTI, TEXAS GALENA PARK, TEXAS (Port of Houston)

A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORP.

COMING MEETINGS

JUNE

Oil & Gas Assn. of Michigan, Annual Stag Party, Country Club of Lansing, Lansing, Mich., Tues., June 16.
North American Gasoline Tax Conference, Regional Conference, New York, N. Y., Fri., June 19.
American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J., Mon.-Fri., June 22-26.
New Jersey Oil Trade Assn., Summer Golf Outing, Suburban Golf Club, Union, N. J., Thurs., June 25.

SEPTEMBER

Oil Trades Assn. of New York, Sports Day, Pelham Country Club, Pelham Manor, N. Y., Tues., Sept. 8.
National Assn. of Assessing Officers, 9th Annual Conference, Cosmopolitan Hotel, Denver, Colo., Wed.-Sat., Sept. 9-12.
National Petroleum Assn., Annual Meeting, Hotel Traymore, Atlantic City, N. J., Wed.-Fri., Sept. 16-18.
New England Tax Conference, Hotel Biltmore, Providence, R. I., Wed.-Thurs., Sept. 30-Oct. 1.

OCTOBER

31st National Safety Congress and Exposition, Stevens Hotel, Chicago, Ill., Mon.-Fri., Oct. 5-9.
Texas Mid-Continent Oil & Gas Assn., 23rd Annual Meeting, Dallas, Tex., Thurs.-Sat., Oct. 8-10.
American Society of Mechanical Engineers, Fall Meeting, Rochester, N. Y., Mon.-Wed., Oct. 12-14.
Indiana Independent Petroleum Assn., Hotel Severin, Indianapolis, Ind., Wed.-Thurs., Oct. 14-15.
National Stripper Well Assn., Annual Meeting, Wichita, Kans., Mon., Oct. 19.
National Tax Conference, Netherlands Plaza Hotel, Cincinnati, Ohio, Mon.-Thurs., Oct. 19-22.
Ohio Petroleum Marketers Assn., Annual Convention and Marketing Exposition, Hotel Deshler-Wallick, Columbus, Ohio, Wed.-Thurs., Oct. 20-21.
Independent Petroleum Assn. of America, 13th Annual Meeting, Wichita, Kans., Tues.-Thurs., Oct. 20-22.
National Lubricating Grease Institute, 10th Annual Meeting, New Orleans, La., Sun.-Thurs., Oct. 25-29.
1942 Illinois Mineral Industries Conference, Campus, University of Illinois, Urbana, Ill., Fri.-Sat., Oct. 30-31.

NOVEMBER

American Petroleum Institute, 23rd Annual Meeting, Stevens Hotel, Chicago, Ill., Mon.-Fri., Nov. 9-13.
American Institute of Chemical Engineers, 35th Annual Meeting, Netherland Plaza, Cincinnati, O., Mon.-Wed., Nov. 16-18.
American Chemical Society, National Chemical Exposition and National Industrial Chemical Conference, Stevens Hotel, Chicago, Ill., Tues.-Sat., Nov. 17-21.
American Society of Mechanical Engineers, Annual Meeting, New York, N. Y., Mon.-Fri., Nov. 30-Dec. 4.

First Quarter 'Gas' Gallonage Up 1.8% in Pennsylvania

Special to NPN

HARRISBURG—Pennsylvania's Department of Revenue reports 1.82% more taxable gasoline consumption during the first quarter of 1942 as compared with same period in 1941. Total gallonage for the period was 354,653,215.

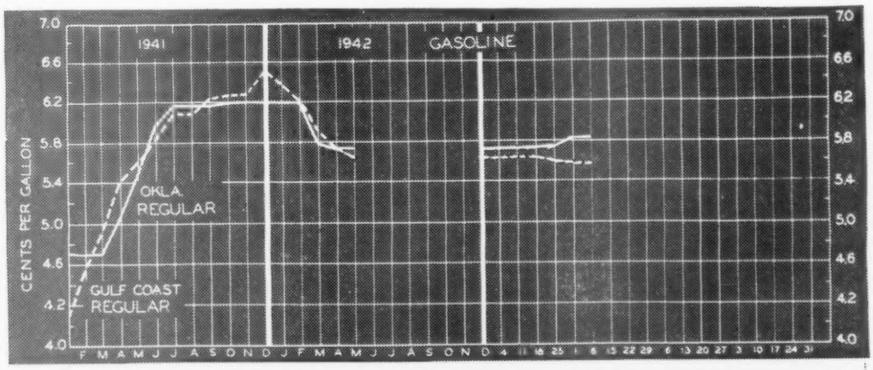
March gallonage was reported down 1.083%; February, down 1.517%; January, up 8.02%.

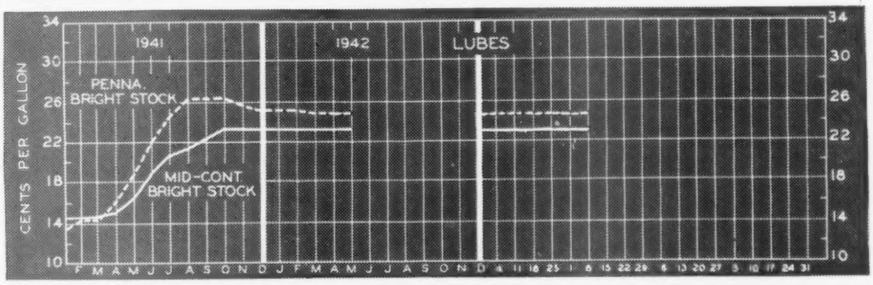
Not included in the above figures is U. S. government tax exempt gasoline gallonage. This gasoline consumption increased 12.9%, or 325,918 gal., for the first quarter; up 0.5% in January; up 26.5% in February; and up 12% in March. Total first quarter consumption was 2,849,593 gal.

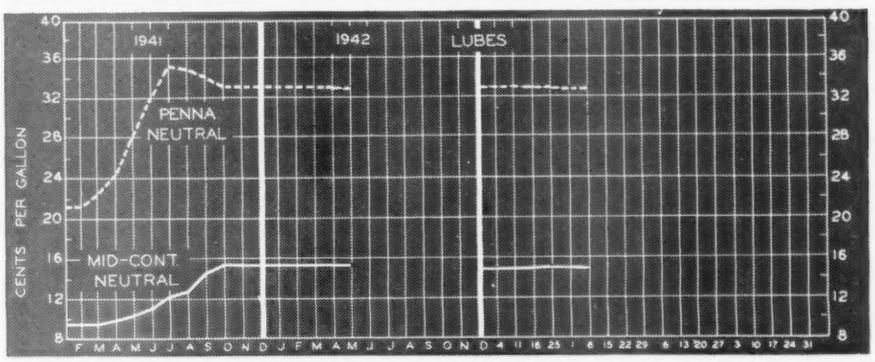
STATISTICS

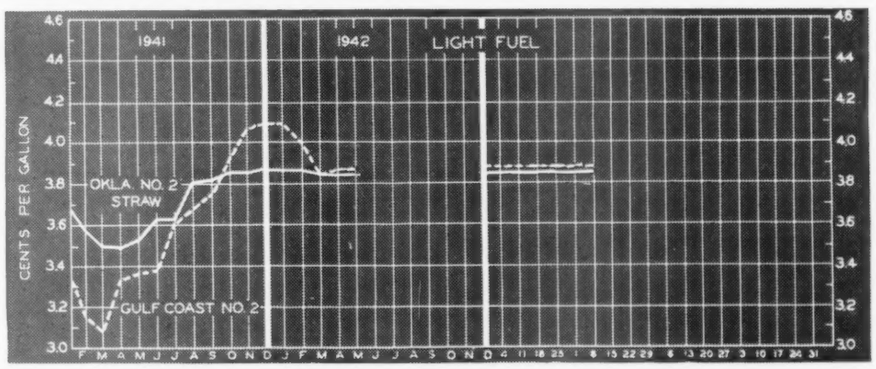
Refinery Prices

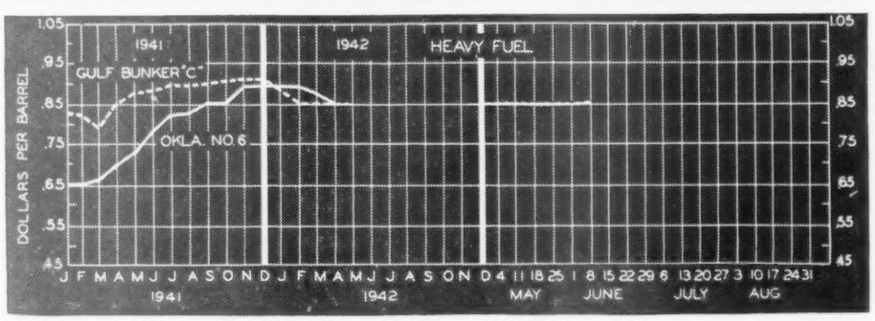
Monthly prices in graphs are averages of daily high and low prices shown in Platt's Oilgram Weekly prices are averages of high and low prices shown in Monday Oilgram, and in NPN











Canadian Gasoline Consumption

(Compiled by Transportation Branch of Dominion Bureau of Statistics from Provincial tax reports. Figures in gallons.*)

	January-February 1942	January-February 1941
Prince Edw. Island	568,000	205,000
Nova Scotia	4,700,000	3,707,000
New Brunswick	3,199,000	2,459,000
Quebec	18,084,000	15,061,000
Ontario	50,014,000	47,779,000
Manitoba	6,932,000	4,067,000
Saskatchewan	7,326,000	4,894,000
Alberta	10,397,000	7,920,000
British Columbia	9,588,000	9,179,000
Total	110,808,000	95,271,000

*Imperial gallons, approximately 1.2 U. S. gallons.

Gasoline Consumption by States

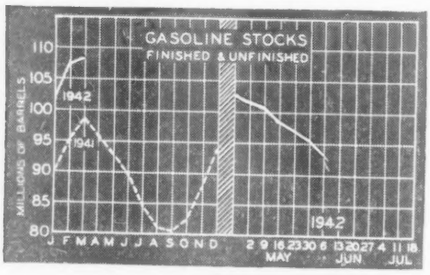
(American Petroleum Institute figures in thousands of gallons)

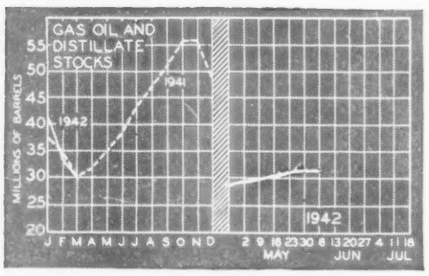
	March 1942	March 1941	% of change
Alabama	25,700	25,355	+ 1.36
Arizona	10,492	9,863	+ 6.38
Arkansas	16,839	16,803	+ 0.21
California	200,626	173,088	+15.91
Colorado (a)	.....	.....	.....
Connecticut	30,427	30,368	+ 0.19
Delaware	4,963	4,896	+ 1.37
Dist. of Columbia	14,943	14,761	+ 1.23
Florida	42,396	45,470	— 6.76
Georgia	33,942	36,928	— 8.09
Idaho	7,414	8,647	—14.26
Illinois	103,088	125,210	—17.67
Indiana	59,167	63,600	— 6.97
Iowa	46,769	43,857	+ 6.64
Kansas	38,549	41,607	— 7.35
Kentucky	22,992	25,703	—10.55
Louisiana	19,086	25,949	—26.45
Maine	11,011	10,519	+ 4.68
Maryland	27,170	26,586	+ 2.20
Massachusetts	56,398	58,912	— 4.27
Michigan	94,311	102,433	— 7.93
Minnesota	44,493	41,512	+ 7.18
Mississippi	19,324	18,890	+ 2.30
Missouri	55,393	61,703	—10.23
Montana	8,971	11,863	—24.38
Nebraska	16,741	19,189	—12.76
Nevada	3,902	3,240	+20.43
New Hampshire	6,566	6,739	— 2.57
New Jersey	78,142	76,274	+ 2.45
New Mexico	8,228	8,864	— 7.18
New York	140,198	147,971	— 5.26
N. Carolina	40,611	42,349	— 4.10
N. Dakota	13,156	9,522	+38.16
Ohio	116,321	119,981	— 3.05
Oklahoma	34,639	38,240	— 9.42
Oregon	25,558	22,522	+13.48
Pennsylvania	123,548	124,753	— 0.97
Rhode Island	10,915	11,555	— 5.54
S. Carolina	21,642	22,382	— 3.32
S. Dakota	11,785	11,910	— 1.05
Tennessee	26,113	32,028	—18.46
Texas	136,251	126,903	+ 7.37
Utah	7,923	8,474	— 6.50
Vermont	5,022	4,972	+ 1.01
Virginia	36,527	36,118	+ 1.13
Washington	36,786	33,894	+ 8.53
W. Virginia	16,073	16,661	— 3.53
Wisconsin	45,585	44,953	+ 1.41
Wyoming	4,944	5,164	— 4.26
Total	1,961,640	1,999,183	— 1.88
Daily average	63,279	64,490	

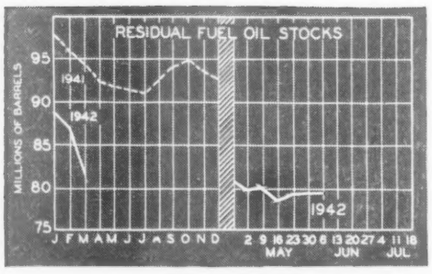
(a) Not available at time of publication.

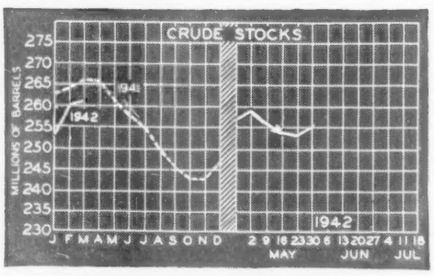
STATISTICS

Monthly figures are actual as reported by Bureau of Mines. Weekly figures are as estimated by American Petroleum Institute on Bureau of Mines basis, except crude stocks which are as reported by Bureau of Mines.









Refinery Operations

(American Petroleum Institute figures in thousands of barrels of 42 gallons each. Figures include reported totals plus an estimate of unreported amounts and are therefore on a Bureau of Mines basis.)

Districts	Daily Potential Refining Capacity Week Ended May 30	Daily Potential Refining Capacity Week Ended May 23	Per Cent of Refining Capacity Reporting Week Ended May 30	Per Cent of Refining Capacity Reporting Week Ended May 23	Daily Average Crude Runs to Stills Week Ended May 30	Daily Average Crude Runs to Stills Week Ended May 23	Per Cent of Reported Capacity Operated Week Ended May 30	Per Cent of Reported Capacity Operated Week Ended May 23
Combined‡	2,382	2,383	87.9	87.9	1,519	1,457	63.7	61.1
Appalachian	174	174	84.5	84.5	159	152	91.4	87.4
Ind., Ill., Ky.	784	784	84.9	84.9	778	712	99.2	90.8
Okla., Kans., Mo.	418	418	81.1	81.1	360	361	86.1	86.4
Rocky Mt.	138	138	50.7	50.7	90	92	65.2	66.7
California	787	787	90.9	90.9	616	619	78.3	78.7
TOTAL U. S.—B. of M. Basis	4,684	4,684	86.9	86.9	3,522	3,393	75.2	72.4
U. S.—B. of M. Basis May 31, 1941					3,759			

Districts	Gasoline Production at Refineries inc. Natural Blended Week Ended May 30	Gasoline Production at Refineries inc. Natural Blended Week Ended May 23	Stocks of Finished and Unfinished Gasoline Week Ended May 30	Stocks of Finished and Unfinished Gasoline Week Ended May 23	Total Stocks Gas Oil & Distillates Week Ended May 30	Total Stocks Gas Oil & Distillates Week Ended May 23	Total Stocks Residual Fuel Oil Week Ended May 30	Total Stocks Residual Fuel Oil Week Ended May 23
Combined‡	4,441	4,153	44,020	44,468	15,024	14,464	16,882	16,625
Appalachian	473	448	3,422	3,623	446	472	620	595
Ind., Ill., Ky.	2,462	2,377	19,294	19,963	2,759	2,799	3,091	3,225
Okla., Kans., Mo.	1,136	1,168	8,893	9,184	1,069	952	1,615	1,578
Rocky Mt.	335	305	2,530	2,473	325	329	572	559
California	1,631	1,591	17,196	17,323	11,761	11,598	56,848	56,860
Total U. S.—B. of M. Basis	10,478	10,042	95,355*	97,034†	31,384	30,614	79,628	79,442
U. S.—B. of M. Basis May 31, 1941	12,349		93,156		35,373		91,370	

*Finished 88,042,000 bbls.; unfinished 7,313,000 bbls. †Finished 89,713,000 bbls.; unfinished 7,321,000 bbls.

‡Includes East Coast, Inland Texas, Texas Gulf, Louisiana Gulf, and North Louisiana-Arkansas Districts.

Crude Oil Stocks

(Bureau of Mines figures in thousands of barrels)

Grade or Origin	May 23	May 30	Change
Pennsylvania Grade	3,406	3,400	— 6
Other Appalachian	1,393	1,361	— 32
Lima-Michigan	1,523	1,656	+ 133
Illinois-Indiana	16,396	15,697	— 699
Arkansas	3,090	3,078	— 12
Kansas	8,193	8,079	— 114
Louisiana:	13,620	13,654	+ 34
Northern	4,407	4,754	+ 347
Gulf Coast	9,213	8,900	— 313
Mississippi	1,824	1,976	+ 152
New Mexico	6,979	6,870	— 109
Oklahoma	48,675	48,380	— 295
Texas:	94,369	97,446	+3,077
East Texas	22,194	23,448	+1,254
West Texas	23,163	23,369	+ 206
Gulf Texas	25,784	26,453	+ 669
Other Texas	23,228	24,176	+ 948
Rocky Mountain	16,229	16,033	— 196
California	37,407	37,052	— 355
Foreign	319	341	+ 22
Total U. S. refinable	253,423	255,023	+1,600
Heavy in California	11,052	11,083	+ 31

N.P.N. Gasoline Index

	Dealer T.W.	Tank Car
	Cents per Gallon	
June 8	10.48	6.60
Month ago	10.46	6.60
Year ago	9.93	6.50

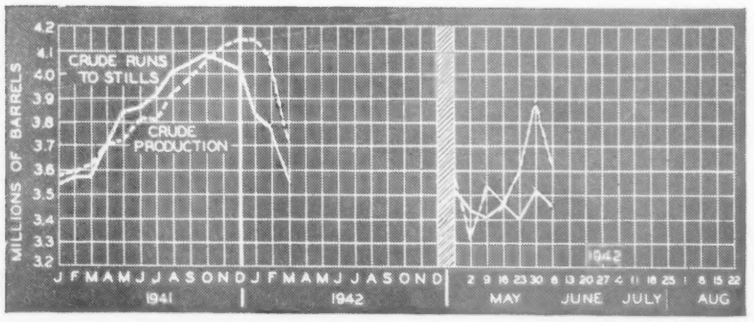
Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is a weighted average of following wholesale markets for regular-grade gasoline, FOB refineries or terminals: Okla., Mid-Western, W. Penna., Calif., N. Y. Harbor, Philadelphia, Jacksonville, Boston, and Gulf Coast.

Pennsylvania Crude Runs

(Compiled by National Petroleum Assn. from reports of all companies which refined Pennsylvania crude. Figures in barrels.)

Week Ended	Daily Average	Week Ended	Daily Average
Jan. 3	72,172	Mar. 28	84,185
Jan. 10	77,676	Apr. 4	78,175
Jan. 17	81,658	Apr. 11	82,557
Jan. 24	84,089	Apr. 18	82,067
Jan. 31	82,603	Apr. 25	79,353
Feb. 7	74,927	May 2	80,399
Feb. 14	77,436	May 9	80,761
Feb. 21	82,682	May 16	86,551
Feb. 28	84,173	May 23	85,563
Mar. 7	80,131	May 30	80,046
Mar. 14	76,862	1941 Low	61,384
Mar. 21	79,510	1941 High	84,326

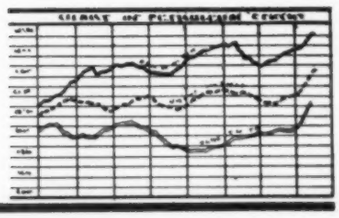

CRUDE RUNS TO STILLS
CRUDE PRODUCTION
MILLIONS OF BARRELS
1942
J F M A M J J A S O N D J F M A M J J A S O N D
2 9 16 23 30 6 13 20 27 4 11 18 25 1 8 15 22
1941
1942
MAY
JUNE
JULY
AUG

Crude Oil Production

(American Petroleum Institute figures)

	WEEK ENDED June 6 Barrels (Daily Average)	WEEK ENDED May 30 Barrels (Daily Average)		WEEK ENDED June 6 Barrels (Daily Average)	WEEK ENDED May 30 Barrels (Daily Average)
Oklahoma	380,200	383,250	Eastern (Ill. & Ind. excluded)	96,050	101,000
Kansas	218,300	256,500	Michigan	65,500	64,400
Nebraska	3,950	4,000	Wyoming	93,800	93,350
Texas	1,275,550	1,549,800	Montana	21,800	21,700
Louisiana	302,900	294,700	Colorado	6,900	6,350
Arkansas	73,200	72,750	New Mexico	54,550	54,450
Mississippi	84,250	82,000	California	608,700	583,000
Illinois	293,650	288,450			
Indiana	22,200	21,300	Total U. S.	3,601,500	3,877,300

Oil MARKETS



Atlantic Coast

NEW YORK, June 6.—East Coast markets for refined products were "dull" the past week, with supply and demand conditions unchanged. Inventories of all products were low, with jobbers and distributors taking all they are permitted under curtailment orders of kerosine and light fuel to build up stocks for next season. Steady call for gasoline prevents suppliers' accumulating stocks and industrial requirements are causing steady drain on limited heavy fuel supplies.

Grave concern was expressed by some independent suppliers over outcome of present situation in which cost of transporting products into District 1 puts suppliers' costs far above selling prices permitted by OPA. Reluctance of some suppliers to join transportation pool, operating at a deficit, is attributable to their inability to bear the burden of transportation losses, they said.

Pennsylvania

NEW YORK, June 6.—Refiners in Western Penna. the past week were busy trying to keep up with demand. Call for all products was active and material scarce. "We're dry as a bone on everything," said one refiner. "The whole line is busy," said another; "gasoline, kerosine, fuels, naphthas, lubes—everything."

Lower field refiners reported reduction of 0.275c in his kerosine quotations to 6.25c for 45 and 46 w.w. and 6.375c for 47 w.w. Same refiner said he now was offering Nos. 1, 2 and 3 and 36-40 gravity fuels at 5.875c and "Q" gasoline at 7.25c. Quotation ranges generally were unchanged, however, reflecting division of opinion between those who by their interpretation of OPA price orders believe they are not entitled to advance prices and those who "see no reason" for selling at lower prices with demand as active and material as scarce as it is.

Mid-Continent

TULSA, June 6.—Stocks of gasoline in Mid-Continent were "tightening by degrees", according to most refiners the past week. Demand was steady. One Oklahoma refiner said last month was "one of the biggest Mays in some time", but another said business was 22-23% below May, 1941, for most part "due to the weather".

Supplies of products heavier than gasoline were low and for most part closely held. Heavy fuels were in greatest demand, with many refiners shipping all they could to District 1.

Oklahoma refiners received two inquiries calling for 750 and 900 long tons, respectively, of "150 D Mid-Continent bright" (no pour point specified) "presumably for export". Refiners quoted 23c for 0-10 and 22.5-23c for 10-25 pour 150-160 vis. D bright.

California

LOS ANGELES, June 5.—Market for all products continued relatively steady the past week. Quotations for gasoline ranged upward from 4.5c for third-grade, 5.5c for regular, and 6.25c for Ethyl. There was said to be some shading of these prices to big buyers.

Heavy fuel continued in demand. Some was reported available at 75c in the Los Angeles Basin. Most refiners were asking 80 to 85c, and some were completely out of the market.

Mid-Western

CHICAGO, June 6.—Low quotations reported by Mid-Western refiners for some grades of gasoline advanced 0.025 to 0.125c early this week with 72-74 oct. ranging 5.625 to 6c, 63-66 oct., 5.25 to 6.25c, and 60 oct. & below 4.875 to 5.25c, FOB Group 3. Marketers Group 3 quotations ranged 5.25 to 5.5c, 4.625 to 5.25c, and 4.5 to 4.625c for the 3 gasolines, respectively.

Good movement of all refined products, particularly fuel oils, was reported throughout the week. Prolonged cold weather in northern states has kept burning oil demand at high rate, some suppliers said.

During the week, tank car marketers reported open spot sales of 16 cars 78 oct. Ethyl gasoline, 10 cars at 6.25c, 6 cars at 6.125c; and 25 cars of regular at 5.375c, FOB Group 3. Refiners Group 3 quotations ranged 6.625 to 6.875c for 78 oct., while marketers quoted 6.125 to 6.375c.

Gulf

NEW YORK, June 6.—Inquiries for kerosine, gas oil, and bunker "C" fuel were reported at the Gulf the week ended June 6, but no resulting sales were reported.

On inquiry for 40 cars of 41-43 kerosine for shipment in buyer's cars into District 1 over 30 days refiner quoted 4.375c. Quotations of other refiners for 41-43 w.w. ranged from 3.875c.

Cargo inquiry for 36 d.i. gas oil for July lifting was reported. Bunker "C" inquiry was for 10,000 bbls. per month over July, August, and September in buyer's barges. No destination was named. Bunker "C" cargoes were quoted at $0.85 per bbl.

Index of Governmental Orders Concerning Petroleum Prices

Orders, "requests", "ceilings", and other statements issued by governmental agencies concerning prices of petroleum and products, prices for which are published in this market section of NATIONAL PETROLEUM NEWS, have been published as follows:

	NATIONAL PETROLEUM NEWS	PLATT'S OILGRAM	Platt's OIL-Law-GRAM
Nov. 21, '41—Maximum prices for paraffin wax	Nov. 26, pg. 5	Nov. 21, pg. 1	Pg. 66
Jan. 17, '42—OPA letter restating contents of letters of Nov. 7, 10 and 28, '41;	Jan. 21, pg. 7	Jan. 19, pg. 1	Pg. 135
Jan. 28, '42—Amendment No. 1 to paraffin wax price schedule	Feb. 11, pg. 20	Jan. 29, pg. 1	Pg. 153
Feb. 2, '42—OPA Price Schedule No. 88	Feb. 11, pg. 17	Feb. 4, pg. 1	Pg. 159
Feb. 5, '42—Amendment No. 1 to OPA Price Schedule No. 88	Feb. 11, pg. 18	Feb. 9, pg. 1	Pg. 167
Feb. 7, '42—Amendment No. 2 to OPA Price Schedule No. 88	Feb. 11, pg. 18	Feb. 9, pg. 1	Pg. 167
Amendment No. 1 to Revised Price Schedule No. 88 (Combined form of Schedule 88 and its 4 previously issued amendments)	Mar. 11, pg. 15	Mar. 7, pg. 1	Pg. 205
Mar. 25, '42—Maximum prices for Penna. grade crude	Apr. 1, pg. 19	Mar. 25, pg. 1	Pg. 237
Mar. 26, '42 — Maximum s.s. prices for regular-grade gasoline in East Coast & Pacific Northwest	Apr. 1, pg. 11	Mar. 25, pg. 4	Pg. 243
Mar. 26, '42 — Approval of 0.5c advance in gasoline, Atlantic Coast states	Apr. 1, pg. 10	Mar. 25, pg. 4	Pg. 241
Mar. 26, '42—Approval of 0.4c advance in kerosine and light fuels, Atlantic Coast states	Apr. 1, pg. 10	Mar. 25, pg. 4	Pg. 241
Mar. 26, '42—Maximum prices for Bunker "C" & No. 6 fuel, East & Gulf Coasts	Apr. 1, pg. 11	Mar. 25, pg. 4	Pg. 242
Apr. 4, '42—Minimum 3c margin for operators in Curtailment Area	Apr. 8, pg. 3	Apr. 7, pg. 2	Pg. 271
Apr. 4, '42—Prices for crude from wells opened since Oct. 1, '41	Apr. 8, pg. 5	Apr. 6, pg. 1	Pg. 273
Apr. 18, '42 — Price advance for Ritchie, La. crude	Apr. 22, pg. 10	Apr. 20, pg. 2	Pg. 309
Apr. 27, '42—Tank wagon prices: Arkansas, Montana, New Mexico, Oklahoma, Wyoming	May 13, pg. 7	Apr. 29, pg. 1	Pg. 353
Apr. 28, '42—East Coast advance effective Apr. 30	Apr. 29, pg. 3	Apr. 29, pg. 1	Pg. 355
Apr. 28, '42—Maximum service station prices	May 6, pg. 12	Apr. 29, pg. 2	Pg. 358
May 12, '42—Maximum prices Pacific Coast area	May 20, pg. 7	May 14, pg. 2	Pg. 402
May 26, '42—Discounts frozen at Oct. 1-15, '41 levels	June 3, pg. 9	May 27, pg. 1	Pg. 439

REFINERY and SEABOARD PRICES

In bulk lots by Motor Transport, Tank Car, Barge or Tanker as shown

NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.

HOW PRICES ARE REPORTED—

Refinery and Seaboard prices in National Petroleum News are gathered by PLATT'S OILGRAM and are published in the Monday issue of the OILGRAM.

PLATT'S OILGRAM is a reporting service issued in three identical editions daily from News Bureaus at New York, Cleveland, and Tulsa, Okla. PLATT'S OILGRAM gathers and publishes what its publisher and representatives believe to be accurate news of sales, prices and current happenings affecting the oil industry and that will be of interest to its subscribers. As this information is usually private, OILGRAM reports it according to what it is able to obtain from sources deemed reliable.

All information is supplied without guarantee as to its completeness, accuracy, time of transmission or promptness of delivery.

The subscriber receives this information for his private use and not for resale or further distribution.

Publisher reserves the right to change the extent, nature and form of showing this information at any time.

Prices shown in the tables are quotations (meaning sellers' general offers or posted prices), or actual sales prices, reported to OILGRAM by refiners for "open spot" transactions, except as otherwise specified.

Prices arrived at by discounts off a specified price or "market date of shipment," prices named in contracts or prices arrived at in accordance with any arrangement made prior to date of sale, are not for "open spot" transactions and therefore are not considered in making the price tables. Prices made to brokers and prices in "Inter-refinery" transactions are also not considered except as may be noted.

All prices are for "immediate" shipment except in Gulf Coast bulk transactions where shipment is generally to be made in ninety days. Prices are FOB refineries, pipelines, or tanker terminals in districts designated.

Prices shown are for quantities in bulk such as tank car lots, motor transport lots or barge lots; and in cents per gallon; heavy fuel oils are in dollars per barrel of 42 U.S. gallons; wax and petrolatums are in cents per pound. Prices applying to barges or cargoes only are so designated.

Prices do not include taxes or inspection fees. Prices are published at the close of the business day.

Mid-Western prices in the tables were gathered from refiners with offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Other refinery prices are given by and for the particular refining district where the material is made and from which it is shipped.

When prices obtained by OILGRAM do not conform to these conditions the exception and the new conditions are noted in the news lead or in conjunction with the price table by footnote or otherwise, for the particular refinery or sales district involved.

Crude oil and products covered by OILGRAM'S news and price service, except where noted, have been represented to the publisher as fully up to the customary trade specifications indicated and according to the generally accepted methods of test; and all crude oil and all products thereof as having been lawfully produced and transported.

Any apparent error should be reported to the nearest OILGRAM or National Petroleum News office at once as no correction will be made after the second issue of the OILGRAM or National Petroleum News following its publication.

NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads.

Summary of Daily Gasoline Prices (June 2 to June 8)

	Monday June 8	Friday June 5	Thursday June 4	Wednesday June 3	Tuesday June 2
U. S. Motor, (ASTM octane)					
78 octane Ethyl:					
Oklahoma	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75
Mid-Western (Group 3 basis)	6.625– 6.875	6.625– 6.875	6.625– 6.875	6.625– 6.875	6.625– 6.875
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	6.75 (2)	6.75 (2)	6.75 (2)	6.75 (2)	6.75 (2)
72-74 octane:					
Oklahoma	5.625– 6	5.625– 6	5.625– 6	5.625– 6	5.625– 6
Mid-Western (Group 3 basis)	5.625– 6	5.625– 6	5.625– 6	5.625– 6	5.625– 6
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.6 – 6	5.6 – 6	5.6 – 6	5.6 – 6	5.6 – 6
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.75	5.75	5.75	5.75	5.75
63-66 octane:					
Oklahoma	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625
Mid-Western (Group 3 basis)	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625	5.25 – 5.625
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.2 – 5.375	5.2 – 5.375	5.2 – 5.375	5.2 – 5.375	5.2 – 5.375
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.5 (1)	5.5 (1)	5.5 (1)	5.5 (1)	5.5 (1)
60 octane & below:					
Oklahoma	4.875– 5.25	4.875– 5.25	4.875– 5.25	4.875– 5.25	4.875– 5.25
Mid-Western (Group 3 basis)	4.875– 5.25	4.875– 5.25	4.875– 5.25	4.875– 5.25	4.875– 5.25
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.625– 5	4.625– 5	4.625– 5	4.625– 5	4.625– 5
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5	5	5	5	5
Motor Gasoline, 72-74 octane (ASTM)					
New York harbor	9.2 –10.2	9.2 –10.2	9.2 10.2	9.2 –10.2	9.2 –10.2
New York harbor, barges	9.1 – 9.2	9.1 – 9.2	9.1 – 9.2	9.1 – 9.2	9.1 – 9.2
Philadelphia district	9.2 – 9.7	9.2 – 9.7	9.2 – 9.7	9.2 – 9.7	9.2 – 9.7
Baltimore district	8.95	8.95	8.95	8.95	8.95
Motor Gasoline:					
Western Penna. Bradford-Warren:					
"Q" Gasoline, Min. 70 Oct. (ASTM)	7.75 (2)	7.75 (2)	7.75 (2)	7.75 (2)	7.75 (2)
Western Penna. Other Districts:					
"Q" Gasoline, Min. 70 Oct. (ASTM)	7.25 – 7.5	7.25 – 7.5	7.25 – 7.5	7.25 – 7.5	7.25 – 7.5

REFINERY PRICES

Gasoline—U. S. Motor (ASTM) except where otherwise specified

Prices in Effect	June 8	June 1
OKLAHOMA		
78 oct. Ethyl	6.5 – 6.75	6.5 – 6.75
72-74 oct.	5.625– 6	5.625– 6
63-66 oct.	5.25 – 5.625	5.25 – 5.625
60 oct. & below	4.875– 5.25	4.875– 5.25
60-62 400 e.p.	4.875 (1)	4.875 (1)
MID-WESTERN (Group 3 basis)		
78 oct. Ethyl	6.625– 6.875	6.625– 6.875
72-74 oct.	5.625– 6	5.625– 6
63-66 oct.	5.25 – 5.625	5.25 – 5.625
60 oct. & below	4.875– 5.25	4.875– 5.25
N. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
78 oct. Ethyl	6.5 – 6.75	6.5 – 6.75
72-74 oct.	5.6 – 6	5.6 – 6
63-66 oct.	5.2 – 5.375	5.2 – 5.375
60 oct. & below	4.625– 5	4.625– 5
60-62, 400 e.p.	5.125 (1)	5.125 (1)
W. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
78 oct. Ethyl	6.75 (2)	6.75 (2)
72-74 oct.	5.75	5.75
63-66 oct.	5.5 (1)	5.5 (1)
60 oct. & below	5	5
CENT. W. TEX. (Prices to truck transports)		
80 oct. & above	6.875 (2)	6.875 (2)
72-74 oct.	5.875 (2)	5.875 (2)
67-69 oct.	5.375 (1)	5.375 (1)
62 oct. & below	5.125 (2)	5.125 (2)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
60 oct. & below	No Price	No Price
60-62, 400 e.p.	No Price	No Price
KANSAS (For Kansas destinations only)		
78 oct. Ethyl	7.125 (1)	7.125 (1)
72-74 oct.	5.875–6.2 (2)	5.875–6.2 (2)
63-66 oct.	5.5 –5.8 (2)	5.5 –5.8 (2)
60 oct. & below	5.125–5.4 (2)	5.125–5.4 (2)

Prices in Effect	June 8	June 1
ARK. (For shipment to Ark. & La.)		
72-74 oct., leaded	6 (1)	6 (1)
70-72 oct. "	5.625 (1)	5.625 (1)
62 oct. "	5.25 (1)	5.25 (1)
60 oct. & below, unleaded	5.125 (1)	5.125 (1)
WESTERN PENNA. (Motor gasoline)		
Bradford-Warren:		
"Q" Gasoline, Min. 70 Oct. (ASTM)	7.75 (2)	7.75 (2)
Other districts:		
"Q" Gasoline Min. 70 Oct. (ASTM)	7.25 – 7.5	7.25 – 7.5
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.)		
U.S. Motor: (Oct. ASTM):		
72-74 oct.	8 – 8.5	8 – 8.5
67-69 oct.	7.5 –7.75 (2)	7.5 –7.75 (2)
Str. run gasoline, excluding Detroit shpt.	5 – 5.5	5 – 5.5
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
72-74 oct.	8.375	8.375
CALIFORNIA U.S. Motor:		
78 oct. & above (Ethyl)	6.25 – 8.75	6.25 – 8.75
70-75 oct. (regular)	5.5 – 7.75	5.5 – 7.75
65 oct. & below (3rd grade)	4.5 – 6.75	4.5 – 6.75

Kerosine, Gas & Fuel Oils

Prices in Effect	June 8	June 1
OKLAHOMA		
41-43 grav. w.w.	4.375– 4.5	4.375– 4.5
42-44 grav. w.w.	4.5 – 4.625	4.5 – 4.625
Range Oil	4 – 4.375	4 – 4.375
No. 1 P.W.	3.875– 4.25	3.875– 4.25
No. 1 straw	3.875–4 (1)	3.875–4 (1)
No. 2 straw	3.6 – 4.125	3.6 – 4.125
No. 3 fuel	3.5 (2)	3.5 (2)
U. G. I. Gas Oil	3.625 (1)	3.625 (1)
No. 6 fuel	$0.80–$0.90 (2)	$0.80–$0.90 (2)
14-16 fuel	$0.95 (1)	$0.95 (1)
MID-WESTERN (Group 3 basis)		
41-43 grav. w.w.	4.375– 4.625	4.375– 4.625
42-44 grav. w.w.	4.5 (2)	4.5 (2)
Range Oil	4 (1)	4 (1)
No. 1 p.w.	3.875– 4.125	3.875– 4.125
No. 2 straw	3.6 – 3.625	3.6 – 3.625
No. 3	3.5	3.5
No. 5	$0.85 (1)	$0.85 (1)
No. 6	$0.80–$0.85 (2)	$0.80–$0.85 (2)
N. TEX. (For shpt. to Tex & N. M. dest'ns.)		
41-43 grav. w.w.	4.25 – 4.75	4.25 – 4.75
No. 1 P.W.	4.1 –4.2 (2)	4.1 –4.2 (2)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
41-43 grav. w.w.	No Price	No Price
No. 1 straw	4.3 (1)	4.3 (1)
KANSAS (For Kansas destinations only)		
41-43 grav. w.w.	No Price	No Price
42-44 gravity w.w.	4.8 –4.875 (2)	4.8 –4.875 (2)
No. 1 p.w.	4.25–4.3 (2)	4.25–4.3 (2)
No. 6 fuel	$0.90 (1)	$0.90 (1)

REFINERY PRICES (Continued)

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

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Kerosine, Gas & Fuel Oil

(Continued)

Prices In Effect	June 8	June 1
ARK. (For shipment to Ark. and La.)		
41-43 grav. w.w.	4.625 (1)	4.625 (1)
No. 1	4 (1)	4 (1)
No. 2	3.5 (1)	3.5 (1)
No. 3 fuel	3.5 (1)	3.5 (1)
Tractor fuel, for shpt. to Ark. points only.	4.875 (1)	4.875 (1)
WESTERN PENNA.		
Bradford-Warren:		
45 grav. w.w.	6.375– 6.65	6.375– 6.65
46 grav. w.w.	.....	.....
No. 1 fuel	6.5 – 6.65	6.5 – 6.65
No. 2 "	6.5 – 6.725	6.5 – 6.725
No. 3 "	6.5–6.85 (2)	6.5–6.85 (2)
36-40 gravity	6.25 – 6.5	6.25 –6.5 (2)
Other districts:		
45 grav. w.w.	6.25 – 6.525	6.25 – 6.525
46 grav. w.w.	6.25 – 6.5	6.25 – 6.525
47 grav. w.w.	6.375– 6.65	6.375– 6.65
No. 1 fuel	5.875– 6.25	5.875– 6.25
No. 2 "	5.875– 6.125	5.875– 6.125
No. 3 "	5.875– 6.125	5.875– 6.125
36-40 grav., Pittsburgh dist. prices excluded	5.875– 6.125	5.875– 6.125
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.)		
47-49 gravity w.w.	5.5 – 6	5.5 – 6
P.W. Distillate	5.5	5.5
No. 3 gas oil, Straw.	5 – 5.3	5 – 5.3
U.G.I. gas oil	4.5 (2)	4.5 (2)
Fuel Oils (Vis. at 100).		
300-500 Vis.	4 (2)	4 (2)
100-300 Vis	4.5 (2)	4.5 (2)
OHIO (S. O. quotations for statewide delivery)		
Kerosine	7	7
CALIFORNIA		
40-43 grav. w.w.	4.5 – 7	4.5 – 7
San Joaquin Valley:		
Heavy fuel	$0.85	$0.85
Light fuel	$0.95	$0.95
Diesel fuel	2.75 – 4	2.75 – 4
Stove dist.	2.75 – 5	2.75 – 5
Los Angeles:		
Heavy fuel	$0.80 –$0.85	$0.80 –$0.85
Light fuel	$0.85 –$0.95	$0.85 –$0.95
Diesel fuel	2.75 – 4	2.75 – 4
Stove dist.	2.75 – 5	2.75 – 5
San Francisco:		
Heavy fuel	$0.90	$0.90
Light fuel	$1.00	$1.00
Diesel fuel	4.5	4.5
Stove dist.	5.5	5.5

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200 and stove distillate, spec. 100.

Lubricating Oils

WESTERN PENNA.

Prices are for sales made, or offers reliably reported, to jobbers & compounders only.

Viscous Neutrals—No. 3 col. Vis. at 70° F.

200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	40.5 (1)	40.5 (1)
10 p.t.	39.5 (1)	39.5 (1)
15 p.t.	38.5 (1)	38.5 (1)
25 p.t.	33	33
150 Vis. (143 at 100°) 400-405 fl.		
0 p.t.	38.5 (1)	38.5 (1)
10 p.t.	37.5 (1)	37.5 (1)
15 p.t.	36.5(1)	36.5 (1)
25 p.t.	31	31
Cylinder Stocks		
Brt. stk., 145-155 vis. at 210°, 540-550 fl., No. 8 col.		
10 p.t.	30.5 (1)	30.5 (1)
15 p.t.	29.5 (1)	29.5 (1)
25 p.t.	25	25
600 S.R. filterable	15	15
650 S.R.	15.5	15.5
600 fl.	16	16
630 fl.	17	17
MID-CONTINENT (F. o. b. Tulsa)		
Neutral Oils (Vis. at 100° F. 0 to 10 P.P.)		
Pale Oils:		
Vis. Color		
60-85—No. 2	8	8
86-110—No. 2	8.5	8.5
150—No. 3	14.5	14.5
180—No. 3	15	15
200—No. 3	15	15
250—No. 3	16–16.5	16–16.5
280—No. 3	17	17
300—No. 3	18	18

Lubricating Oils (Cont'd)

Prices In Effect	June 8	June 1
Red Oils:		
180—No. 5	15 (1)	15 (1)
200—No. 5	15 (1)	15 (1)
280—No. 5	No Price	No Price
300—No. 5	17.5 (2)	17.5 (2)

Note: Viscous Neutrals, 15-25 p.p. generally are quoted 0.5c under 0-10 p.p. oils. Non-viscous oils, 15-25 p.p., generally are quoted 0.25c under 0-10 p.p. oils.

Bright Stock—Vis. at 210°		
200 Vis. D	27 (1)	27 (1)
150-160 Vis. D:		
0 to 10 p.p.	23	23
10 to 25 p.p.	22.5–23	22.5–23
25 to 40 p.p.	23(1)	23 (1)
150-160 Vis. E	22 (2)	22 (2)
120 Vis. D:		
0 to 10 p.p.	22 (2)	22 (2)
600 S.R. Dark Green	8.5(1)	8.5 (1)
600 S.R. Olive Green	10–11	10–11
631 S.R.	18.5 (1)	18.5 (1)
Black Oil	5.5 (1)	5.5 (1)

SOUTH TEXAS Neutral Oils

Vis. Color		
Pale Oils: (*Vis. at 100° F.*)		
100 No. 1½-2½	6.5	6.5
200 No. 2-3	8.75	8.75
300 No. 2-3	9.25	9.25
500 No. 2½-3½	10	10
750 No. 3-4	10.25	10.25
1200 No. 3-4	10.375	10.375
2000 No. 4	10.5	10.5
Red Oils:		
100 No. 5-6	6.5 (2)	6.5 (2)
200 No. 5-6	8.75	8.75
300 No. 5-6	9.25	9.25
500 No. 5-6	10	10
750 No. 5-6	10.25	10.25
1200 No. 5-6	10.375	10.375
2000 No. 5-6	10.5–11.5	10.5–11.5

CHICAGO (From Mid-Continent p.l. crude.)

Neutral oils (Vis. at 100° F. 0 to 10 p.p.)

Pale Oils		
Vis. Color		
60-85—No. 2	9.5 (1)	9.5 (1)
86-110—No. 2	10 (1)	10 (1)
150—No. 3	15.5 (1)	15.5 (1)
180—No. 3	16 (1)	16 (1)
200—No. 3	16 (1)	16 (1)
250—No. 3	17 (1)	17 (1)
Red Oils:		
180—No. 5	16 (1)	16 (1)
200—No. 5	16 (1)	16 (1)
250—No. 5	17 (1)	17 (1)
280—No. 5	18 (1)	18 (1)
300—No. 5	18.5 (1)	18.5 (1)

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower.

Unfiltered Steam Refined: (Viscosity at 210°)		
140	11.5 (1)	11.5 (1)
160	12.5 (1)	12.5 (1)
200	13.5 (1)	13.5 (1)
Bright stocks, 160 vis. at 210 No. 8 color:		
0 to 10 p.p.	24 (1)	24 (1)
15 to 25 p.p.	23.5(1)	23.5 (1)
30 to 40 p.p.	21.5 (1)	21.5 (1)
E filtered Cyl. Stock	15.5 (1)	15.5 (1)

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

Natural Gasoline

(Group 3 & Breckenridge prices are to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

FOB GROUP 3		
Grade 26-70	2.375 (Sales)	2.375 (Sale)
FOB BRECKENRIDGE		
Grade 26-70	2 (Qtns.)	2 (Qtn.)
CALIFORNIA (FOB plants in Los Angeles basin)		
21 pound vapor pressure for blending	4.75	4.75 – 5.375

Naphtha and Solvent

Prices in Effect	June 8	June 1
(FOB Group 3)		
Stoddard solvent	6.625	6.625
Cleaners' naphtha	7.125	7.125
V. M. & P. naphtha	7.125	7.125
Mineral spirits	6.125	6.125
Rubber solvent	7.125	7.125
Lacquer diluent	7.375– 8.125	7.375– 8.125
Benzol Diluent	7.875– 8.625	7.875– 8.625
WESTERN PENNA.		
Bradford-Warren District:		
Stoddard Solvent	7.5 (1)	7.5 (1)
Other Districts:		
Untreated naphtha	7 (2)	7 (2)
Stoddard solvent	7.25 – 7.75	7.25 – 7.75
OHIO (S. O. quotations for statewide delivery): V.M.&P. naphtha, D.C. naphtha, Varnolene & Sohio solvent	10	10
Rubber solvent	9	9

Wax

White Crude Scale:

WESTERN PENNA. (Bbls. C.L.)		
122-124 A.m.p.	4.25	4.25
124-126 A.m.p.	4.25	4.25
OKLAHOMA (C.L., FOB Refinery)		
Semi-refined:		
128 AMP min., white, 50 kilo bags	No Price	No Price
132-134 AMP, bbls.	5.25 (1)	5.25 (1)

CHICAGO (FOB Chicago district refinery of one refiner, in bags, carloads. Carloads, slabs loose 0.4c less. Melting points are EMP (ASTM) methods; add 3° to convert into AMP.)

Fully refined:		
122-124 (bags only)	5.6	5.6
125-127	6	6
127-129	6.25	6.25
130-132	6.55	6.55
132-134	6.8	6.8
135-137	7.55	7.55

Petrolatums

WESTERN PENNA. (Bbls., carloads; tank cars, 0.5c per lb. less.)

Snow White	6.125– 7.25	6.125– 7.25
Lily White	5.375– 6.125	5.375– 6.125
Cream White	4.375– 5.375	4.375– 5.375
Light Amber	3.375– 3.875	3.375– 3.875
Amber	3.125– 3.625	3.125– 3.625
Red	3 – 3.5	3 – 3.5

Group 3 Freight Rates

To Division Headquarters Points of Standard Oil Co. of Indiana

(Cents Per Gal.)

	Gasoline Kerosine	*Distillate Fuel Oil	Gas Oil and or Residual Fuel Oil
Chicago, Ill.	2.508	2.508	2.516
Decatur, Ill.	2.244	2.244	2.442
Joliet, Ill.	2.508	2.508	2.516
Peoria, Ill.	2.310	2.310	2.442
Quincy, Ill.	2.178	2.178	2.294
Indianapolis, Ind.	2.640	3.034	3.034
Evansville, Ind.	2.442	2.886	2.886
South Bend, Ind.	3.135	3.135	3.330
Detroit, Mich.	4.290	3.996	3.996
Grand Rapids, Mich.	3.828	3.828	3.922
Saginaw, Mich.	4.290	4.144	4.144
Green Bay, Wis.	2.838	2.838	3.182
Milwaukee, Wis.	2.706	2.706	2.738
La Crosse, Wis.	2.574	2.574	2.886
Minneapolis-St. Paul	2.574	2.574	2.886
Duluth, Minn.	2.838	2.838	3.256
Mankota, Minn.	2.574	2.574	2.886
Des Moines, Ia.	2.046	2.046	2.294
Davenport, Ia.	2.310	2.310	2.442
Mason City, Ia.	2.376	2.376	2.664
St. Louis, Mo.	2.046	2.046	2.072
Kansas City, Mo.	1.518	1.518	1.776
St. Joseph, Mo.	1.518	1.518	1.776
Fargo, N. D.	3.564	3.564	3.996
Huron, S. D.	3.036	3.036	3.330
Wichita			
From Ponca City	0.528	0.528	0.592
From Tulsa	0.858	0.858	0.962
From Cushing	0.792	0.792	0.888

*Not suitable for illuminating purposes.

SEABOARD PRICES EXPORT AND COASTWISE

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads

Atlantic Coast

(Prices are of refiners, FOB their refineries & their tanker terminals, & of tanker terminal operators FOB their terminals)—Prices In Effect June 8

MOTOR GASOLINE

District:	Min. 80 Oct. '39 Research (Max. 2 cc. Lead)	72-74 Oct. (ASTM)	68-70 Oct. (ASTM)
N. Y. Harb.	9.8 (1)	9.2 –10.2	9.2 (1)
N. Y. Harb., barges	9.7 (1)	9.1 – 9.2	9.1 (1)
Albany	....	9.3 – 9.5	....
Philadelphia	....	9.2 – 9.7	9.2 (1)
Baltimore	....	8.95	8.85 (1)
Norfolk	....	8.7 – 8.95	8.5 (2)
Wilmington, N. C.	....	8.7 – 8.8	8.4 –8.5 (2)
Charleston	....	8.7 – 8.8	8.1 –8.4 (2)
Savannah	....	8 – 8.9	8 (1)
Jacksonville	....	7.875–8.9	7.875– 8 (2)
Miami	....	8.275–8.9 (2)	7.9 (1)
Tampa	....	7.5 – 8.9	7.875– 8 (2)
Pensacola	....	7 – 7.2 (1)	6.6 –6.8 (1)
Mobile	....	7 – 7.5	6.6 –6.8 (1)
New Orleans	....	6.25–7.37	....
Portland	....	9.5 – 9.8	....
Boston	....	9.4 – 9.7	9.7 (1)
Providence	....	9.4 – 9.7	....

FUEL OILS

	KEROSINE and/or NO. 1 FUEL	No. 2	No. 3	No. 5	No. 6
N. Y. Harb.	5.7	5.8	5.8	$2.10 –2.25 (a)	$1.80
N. Y. Harb., barges	5.6	5.7	5.7	....	....
Albany	5.9	5.9	5.9	$2.40 (1)	$2.00 (1)
Philadelphia	5.8	5.8	5.8	$2.13 (2)	$1.80
Baltimore	5.8	5.8	5.8	....	$1.80
Norfolk	5.7 – 5.8	5.8	5.8 (1)	....	$1.80 (2)
Wilmington, N. C.	5.65	5.8	....	....	....
Charleston	5.8	5.8 (2)	....	....	$1.75 (2)
Savannah	5.65	....	....	....	$1.75 (1)
Jacksonville	5.4 – 5.65	5.35 (2)	5.35 (1)	....	$1.75 (1)
Miami	5.65 (2)	....	....	....	....
Tampa	5.25 – 5.65	5.35 (2)	....	....	$1.70 (1)
Pensacola	4.8 (1)	....	....	....	....
Mobile	4.75	....	....	....	....
New Orleans	4.25 – 4.875	3.75 –3.875 (2)	....	$1.25 (1)	$0.85 (2)
Portland	5.9	5.9	5.9 (2)	$2.40 (1)	$1.80 (2)
Boston	5.8	5.8	5.8 (2)	$2.10 (2)	$1.80
Providence	5.8	5.8	5.8	$2.05 –$2.10	$1.80

(a) This price is for a straight-run, low pour test No. 5 fuel.

	Bunker C Fuel Ships' bunkers (Ex Lighterage)	Diesel Oil Ships' bunkers (Ex Lighterage)	Diesel Oil Shore Plants	Gas House Gas Oil 28-34 Gravity
N. Y. Harbor	$1.80	$2.402	5.8 –5.9 (2)	5.9 (2)
Albany	$2.00 (1)	$2.602 (1)	5.9 (2)	6.1 (1)
Philadelphia	$1.80	$2.402	....	....
Baltimore	$1.80	$2.402	5.8 (1)	5.8 (1)
Norfolk	$1.80	$2.402	5.8 (1)	5.8 (1)
Charleston	$1.75	$2.402 (2)	5.8 (1)	5.8 (1)
Savannah	$1.75 (1)	$2.242 (1)	....	....
Jacksonville	$1.75 (2)	$2.242-2.247 (2)	....	....
Tampa	$1.70 (2)	$2.242-2.247 (2)	....	....
New Orleans	$0.85	$1.55 (2)	3.75 (1)	3.75 (1)
Portland	$1.80 (2)	$2.502 (2)	5.9 (1)	6(1)
Boston	$1.80	$2.402	5.8 (2)	5.9 (2)
Providence	$1.80	$2.402 (2)	5.8 (1)	5.9 (1)

Wax

(Melting points are AMP, 3° higher than EMP. Prices are FOB refinery and do not include bag, freight or export differentials).

Prices in Effect June 8

Crude Scale:	New Orleans Export	N. Y. Domestic	N. Y. Export
124-6 Yellow	4.25(1)	....	4.25 (1)
122-4 White	....	4.25	4.25
124-6 White	4.25 (1)	4.25	4.25
Fully Refined:			
123-5	5.2 (1)	5.2 (2)	5.2 (1)
125-7	5.2 (1)	5.2 (2)	5.2 (1)
128-30	5.6 (1)	5.6	5.6 (1)
130-32	5.85 (1)	5.85 (2)	5.85 (1)
133-5	6.15 (1)	6.15	6.15 (1)
135-7	6.4 (1)	6.4 (1)	6.4 (1)

Naphtha

Prices in Effect June 8

	V.M.&P. Naphtha	Mineral Spirits
New York Harbor	11 (2)	10
Philadelphia district	11 (2)	10
Baltimore	10.5 (2)	9.5
Boston	11.5 (2)	10.5
Providence	11.5 (1)	10.5 (2)

Pacific Export

(Quotations at seaboard, Los Angeles, cargo lots, except where otherwise noted.)

Prices In Effect	June 8	June 1
375 e.p. blend, 70 oct.	No Price	No Price
390 e.p. blend, 68 oct.	No Price	No Price
390 e.p. blend, 66 oct.	No Price	No Price
400 e.p. blend, 65 oct. min.	No Price	No Price
U. S. Motor, under 65 octane	No Price	No Price
38-40 grav., w.w. kero., 150 fire point	No Price	No Price
41-43 grav., w.w. kero.	No Price	No Price
44-grav, w.w. kero.	No Price	No Price
Diesel fuel, 24 & above	No Price	No Price
Diesel fuel, under 24	No Price	No Price
30-34 grav. diesel (gas oil) Pac. Spec. 200	No Price	No Price
Grade C fuel, Pac. Spec. 400	No Price	No Price
In Ship's Bunkers, or deep tank lots:		
Diesel fuel, Pac. Spec. 200	$1.40 $1.45	$1.40 –$1.45
Grade C fuel, Pac. Spec. 400	$0.825 $0.85	$0.825–$0.85
Cased Goods: (Per case)		
375-400 e.p. blend, 65 oct. & above	No Price	No Price
400 e.p. blend, under 65 oct.	No Price	No Price
U. S. Motor	No Price	No Price
40-43 grav. w.w. kero., 150 fire point	No Price	No Price
Kero., p.w.	No Price	No Price

Tanker Rates

(Approximate last paid rates, cents per bbl.; Gulf-N. Atlantic, not East of N. Y.)

Hvy. Crude & Fuel (10 to 19.9 gravity)	48
Light Crude, (30 grav. or Lighter)	43
Gasoline	40
Kerosine	40
No. 2 Fuel	42

Note: 200% surcharge permitted on above rates by War Shipping Administration "to cover increased wartime operating expenses."

Gulf Coast

(Prices for sales made or firm offers reliably reported for sales pending in cargoes FOB ship at Gulf, for minimum of 20,000 bbls. Prices are by refiners only to other refiners, export agents, or to large tanker terminal operators at the customary trade specifications noted.)

Prices In Effect June 8

Domestic

Motor Gasoline	
Min. 80 oct. '39 Research, max. 2cc lead	5.5
60-62 Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	5.125– 6
70 oct. unleaded "	5.25 – 5.75
68 oct. " "	5.25 – 5.875
65 oct. " "	5.25 – 5.75
60 oct. " "	5
41-43 w.w. kerosine	3.875– 4.375
No. 2 fuel	3.75 – 4
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	4
43-47 " "	4
48-52 " "	4
53-57 " "	4.125
58 & above diesel index	4.25
Diesel Oil, ship's bunkers (ex-lighterage)	$1.55–$1.68
Bunker C, " " "	$0.85–$0.95
Bunker C, cargoes	$0.85

Export

Motor Gasoline	
60-62 Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	5.125– 6
70 oct. unleaded "	5.25 – 5.75
68 oct. " "	5.25 – 5.875
65 oct. " "	5.25 – 5.75
60 oct. " "	5
41-43 w.w. kerosine	3.875– 4.375
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	4
43-47 " "	4
48-52 " "	4
53-57 " "	4.125
58 & above diesel index	4.25

MID-CONTINENT LUBES

(At Gulf; in packages, FAS.; in bulk, FOB terminals)

Prices in Effect June 8

	Steel Drums	Bulk
200 vis. D 210 brt. stock	34–35 (2)	28.8 (2)
150 vis. D 210 brt. stock 0-10 p.p.	30-31 (2)	24.8 (2)
10-25 p.p.	29.5 (1)	24.3 (1)
100 vis. D 210 brt. stock 0-10 p.p.	29.5 (1)	24.3 (1)
10-25 p.p.	29 (1)	23.8 (1)
200 vis. No. 3 col. neutral: 0-10 p.p.	22 (1)	16.8 (1)

SOUTH TEXAS LUBES

(Vis. at 100°, c. t. 0, blk. exprt. shp., FOB terminals)

Unfiltered Pale Oils: Vis. Color	June 8	June 1
100 No. 3	No Price	No Price
200 No. 3	No Price	No Price
300 No. 3	No Price	No Price
500 No. 3½	No Price	No Price
750 No. 4	No Price	No Price
1200 No. 4	No Price	No Price
2000 No. 4	No Price	No Price
Red Oils:		
100 No. 5-6	No Price	No Price
200 No. 5-6	No Price	No Price
300 No. 5-6	No Price	No Price
500 No. 5-6	No Price	No Price
750 No. 5-6	No Price	No Price
1200 No. 5-6	No Price	No Price
2000 No. 5-6	No Price	No Price

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect June 8, 1942 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. New Jersey

Esso (*Regular Grade*)

	Consumer Tank Wagon	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
*Atlantic City, N. J.	10.2	10.7	4.5	8.3
*Newark, N. J.	10.2	10.7	4.5	8.3
Annapolis, Md.	10.55	11.05	5.5	10.1
Baltimore, Md.	9.95	10.45	5.5	9.1
Cumberland, Md.	11.35	11.85	5.5	10.6
Washington, D. C.	10.2	10.7	4.5	9.6
Danville, Va.	11.65	12.15	6.5	10.85
Norfolk, Va.	10.45	10.95	6.5	10.6
Petersburg, Va.	10.75	11.25	6.5	11.6
Richmond, Va.	10.75	11.25	6.5	11.6
Roanoke, Va.	11.95	12.45	6.5	11.1
Charleston, W. Va.	12.25	12.75	6.5	11.9
Parkersburg, W. Va.	11.55	12.05	6.5	11.6
Wheeling, W. Va.	11.55	12.05	6.5	12.2
Charlotte, N. C.	12.1	12.6	7.5	9.9
Hickory, N. C.	12.65	13.15	7.5	10.9
Mt. Airy, N. C.	12.5	13.0	7.5	10.1
Raleigh, N. C.	11.85	12.35	7.5	10.9
Salisbury, N. C.	12.15	12.65	7.5	11.3
Charleston, S. C.	10.95	11.45	7.5	....
Columbia, S. C.	11.8	12.3	7.5	....
Spartanburg, S. C.	12.5	13.0	7.5	....

	Mineral Spirits T.W.	V.M.&P. T.W.
Newark, N. J.	13	14.5
Baltimore, Md.	15.5	....
Washington, D. C.	15.5	....

Fuel Oils—T.W.	No. 1	No. 2	No. 3
Atlantic City, N. J.	8.3	7.8	7.8
Newark	8.3	7.8	7.8
Annapolis, Md.	....	8.05	....
Baltimore	8.1	7.8	7.8
Washington, D. C.	8.6	8.2	8.2
Norfolk, Va.	8.3	7.6	7.6
Petersburg	8.6	7.8	....
Richmond	8.6	7.8	7.8
Charlotte, N. C.	8.9	9.2	....
Hickory	....	8.8	....
Raleigh	9.9	8.9	....
Charleston, S. C.	....	7.8	....
Columbia	....	8.8	....
Spartanburg	....	9.6	....

*Effective Apr. 30, '42, minimum retail resale price of 14.2c posted thru New Jersey.

Discounts:

Esso gasoline—to undivided dealers, 0.5c off dealer t.w.

Kerosine—1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore city contract not necessary) except no discount in state of New Jersey.

Naphthas—To buyers taking following quantities at one time: Newark, 2c per gal. on 200 gals. or more, less than 200 gals. 0.5c higher price; Baltimore, 2c off on 25 to 100 gals. and 3c on over 100 gals.; Washington, 2c off to contract buyers.

Socony-Vacuum Oil Co., Inc.

Socony Mobilgas (*Regular Grade*)

	Com. Cons. T.W.	Undiv. Dlr. T.W.	Gasoline Taxes
New York City			
Manhattan & Bronx	10.1	10.6	*5.5
Kings & Queens	10.1	10.6	*5.5
Richmond	9.7	10.2	*5.5
Albany, N. Y.	9.9	10.4	5.5
Binghamton, N. Y.	11	11.5	5.5
Buffalo	10.2	10.7	5.5
Jamestown, N. Y.	10.4	10.9	5.5
Mt. Vernon, N. Y.	10.1	10.6	5.5
Plattsburg, N. Y.	11	11.5	5.5
Rochester, N. Y.	10.8	11.3	5.5
Syracuse, N. Y.	10.5	11	5.5
Bridgeport, Conn.	10	10.5	4.5
Danbury, Conn.	10.5	11	4.5
Hartford, Conn.	10.6	11.1	4.5
New Haven, Conn.	10	10.5	4.5
Bangor, Me.	10.7	11.2	5.5
Portland, Me.	10.3	10.8	5.5
Boston, Mass.	9.9	10.4	4.5
Concord, N. H.	11.4	11.9	5.5
Lancaster, N. H.	12	12.5	5.5
Manchester, N. H.	11.3	11.8	5.5
Providence, R. I.	10	10.5	4.5
Burlington, Vt.	10.9	11.4	5.5
Rutland, Vt.	11	11.5	5.5

	Mineral Spirits T.W.	V.M.&P. T.W.
Buffalo, N. Y.	12.4	13.6
New York City	11	12
Rochester, N. Y.	13.2	14.4
Syracuse, N. Y.	14	....
Boston, Mass.	12	13
Bridgeport, Conn.	†16.3	†17.3
Hartford, Conn.	†16.3	†17.3
Providence, R. I.	13	14

	Kerosine Yard	Kerosine TW	Mobilfuel Diesel TC	Mobilfuel Diesel TW	Mobilheat Fuel Yard	Mobilheat Fuel TW
New York:						
Manhat'n & Bronx	6	8.4	...	8.1	6.1	7.8
Kings & Queens	6	8.4	...	8.1	6.1	7.8
Richmond	5.9	8.4	...	...	6	7.6
Albany	6.1	8.1	6.1	8.1	6.1	7.8
Binghamton	7.5	9.5	...	9.5	7.5	9
Buffalo	7.2	9.2	7.3	9.3	7.3	8.8
Jamestown	7.3	9.3	...	9.4	7.4	8.8
Mt. Vernon	6.1	8.6	...	8.2	6.2	7.8
Plattsburg	6.7	8.7	...	8.7	6.7	8.2
Rochester	7.3	9.3	7	9	7	8.5
Syracuse	7.1	9.1	6.9	8.9	6.9	8.4
Conn.:						
Bridgeport	6.2	....	....	....	6.3	7.6
Danbury	6.7	....	....	....	6.6	7.6
Hartford	6.3	....	....	8.3	6.3	7.8
New Haven	6	....	....	8.1	6.1	7.7
Maine:						
Bangor	6.5	8.5	6.5	8.5	6.5	7.9
Portland	6.1	8.5	6.1	8.1	6.1	7.8
Mass.:						
Boston	6.2	8.4	6	8	6.2	7.8
N. H.:						
Concord	7	9	....	....	7.3	8.8
Lancaster	8.1	10.1	....	....	8.3	9.8
Manchester	7.1	9.4	....	....	7	8.5
R. I.:						
Providence	6.2	8.2	6	8	6.2	7.7
Vermont:						
Burlington	6.7	....	6.6	8.6	6.6	8
Rutland	6.9	....	....	8.8	6.8	8.3

*Does not include 1% city sales tax applicable to price of gasoline (ex tax).

†In steel barrels.

Discounts: Diesel—On t.w. deliveries, 0.5c for at least 400 gals.; 1c for full tank truck.

Atlantic Refining

Atlantic White Flash Gasoline (*Regular Grade*)

	Commercial T.W.	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Philadelphia, Pa.	10.2	10.7	5.5	10.55
Pittsburgh	10.7	11.2	5.5	10.9
Allentown	10.7	11.2	5.5	10.9
Erie	10.7	11.2	5.5	10.9
Scranton	10.7	11.2	5.5	10.9
Altoona	10.7	11.2	5.5	10.9
Emporium	10.7	11.2	5.5	10.9
Indiana	10.7	11.2	5.5	10.9
Uniontown	10.7	11.2	5.5	10.9
Harrisburg	10.7	11.2	5.5	10.9
Williamsport	10.7	11.2	5.5	10.9
Dover, Del.	....	11.2	5.5	10.9
Wilmington, Del.	....	10.7	5.5	10.4
Boston, Mass.	....	10.9	4.5	8.4
Springfield, Mass.	....	11.8	4.5	9.3
Worcester, Mass.	....	11.5	4.5	8.9
Fall River, Mass.	....	11	4.5	9.0
Hartford, Conn.	....	11.6	4.5	8.3
New Haven, Conn.	....	11	4.5	9.4
Providence, R. I.	....	11	4.5	9
Atlantic City, N. J.	....	10.7	4.5	8.3
Camden, N. J.	....	10.7	4.5	8.3
Trenton, N. J.	....	10.7	4.5	8.3
Annapolis, Md.	....	11.05	5.5	9.1
Baltimore, Md.	....	10.45	5.5	8.1
Hagerstown, Md.	....	11.55	5.5	8.6
Richmond, Va.	....	11.25	6.5	10.6
Wilmington, N. C.	....	11.55	7.5	10.2
Brunswick, Ga.	....	10.4	7.5	*9.4
Jacksonville, Fla.	....	10.4	8.5	10.4

	Mineral Spirits T.W.†	V.M.&P. T.W.†
Philadelphia, Pa.	11	12.5
Lancaster, Pa.	12	13.5
Pittsburgh, Pa.	12.5	13.5

Fuel Oils—T.W.	1	2	3	5	6
Phila., Pa.	8.4	7.8	7.8	5.82	4.82
Allentown, Pa.	8.9	8.1	8.1	....	....
Wilmington, Del.	8.4	7.8	7.8	....	....
Springfield, Mass.	9.3	8.2	8.2	....	....
Worcester, Mass.	8.9	8.1	8.1	....	....
Hartford, Conn.	8.3	7.8	7.8	....	....

*Does not include 1c Georgia kerosine tax.

†Mineral Spirits prices also apply to Stoddard Solvent; V.M.&P. prices also apply to Light Cleaners Naphtha.

Discounts:

Gasoline—to undivided dealers, 0.5c off dealer t.w., except Georgia & Florida dealer t.w. and undivided dealer t.w. prices are same.

Kerosine—Thru Penna. & Delaware, 2c off t.w. price on t.w. deliveries of 25 gals. or more at one time.

S. O. Ohio††

***Sohio X-70 Gasoline (*Regular Grade*)**

	Consumer T.W.	**Resellers	Gasoline ‡S.S.	Gasoline Taxes	†Kerosine T.W.
Ohio, Statewide	12	10	13.5	5.5	9
Akron	12	9.5	12.5	5.5	9
Cincinnati	12	9.5	12.5	5.5	9
Cleveland	12	9.5	12.5	5.5	9
Columbus	12	9.5	12.5	5.5	9
Dayton	12	9.5	12.5	5.5	9
Marietta	12	9.5	12.5	5.5	9
Portsmouth	12	9.5	12.5	5.5	9
Toledo	12	9.5	12.5	5.5	9
Youngstown	12	9.5	12.5	5.5	9

Aviation Gasoline—Statewide

	Consumer T.W.	Gasoline Taxes
Sohio Aviation	14.5	5.5
Esso Ethyl Aviation 73 Oct.	15.5	5.5
Esso Ethyl Aviation 80 Oct.	16.5	5.5
Esso Ethyl Aviation 91 Oct.	17.5	5.5
Esso Ethyl Aviation 100 Oct.	24.5	5.5

†Naphtha—T.W.

	Statewide	Lucas County
S. R. Solvent	13.5	13.5
D. C. Naphtha	14.5	14.25
V.M.&P. Naphtha	14.5	14.25
Varnolene	14.5	14.25
Sohio Solvent	14.5	14.25

Fuel Oils—T.W.	No. 1	No. 2	No. 3	No. 4
Ohio, Statewide	8	8	7.5	....
Cleveland	10	10	9.5	7.25

*Renown (third-grade) prices are same as X-70 unless otherwise noted.

**Except authorized agents.

†Kerosine prices are ex 1c state tax. Naphtha prices are ex 1.5c federal & 4c state tax.

‡Prices at company-operated stations.

††Statewide prices are subject to exceptions other than those shown.

Discounts:

Esso aviation—on contract to hangar operators and resellers, 2c off consumer t.w.

Fuel oils—Statewide prices are for t.w. & drum deliveries of 50 gals. or more; prices for deliveries of less than 50 gals. are 0.5c higher. Cleveland Nos. 1, 2, and 3 prices are for bulk deliveries of 5 to 99 gals.; 100 gals. and over are 2c less. Cleveland No. 4 price is for full compartment hose dump only.

Naphthas—to contract consumers off t.w. prices—Statewide: 300 to 999 gals., 0.5c; 1000 to 2499 gals., 0.75c; 2500 to 4999 gals., 1c; 5000 or more gals., 1.5c. Lucas County: Less than 50 gals., tank wagon price; 50 to 249 gals., 0.5c; 250 to 499 gals., 1c; 500 gals or over, 1.5c.

S. O. Kentucky

Crown Gasoline (*Regular*)
Standard (*Third Grade*)

	†Net Dealer Crown	Standard	Gasoline Taxes	Kerosine T.W.
Covington, Ky.	9.5	8.5	6.5	9
Lexington, Ky.	11	8.5	6.5	9
Louisville, Ky.	10.5	9.5	6.5	8.5
Paducah, Ky.	8	8	6.5	8.5
Jackson, Miss.	10.5	9.5	7.5	*8.5
Vicksburg, Miss.	10	9	7.5	*8
Birmingham, Ala.	10.5	9.5	*8.5	9
Mobile, Ala.	9.5	7.5	*9.5	8.5
Montgomery, Ala.	10.5	9.5	*9.5	*9
Atlanta, Ga.	10	....	7.5	*9
Augusta, Ga.	11	....	7.5	*8.5
Macon, Ga.	11	....	7.5	*8.5
Savannah, Ga.	10	....	7.5	*8
Jacksonville, Fla.	10	9	8.5	8
Miami, Fla.	10	9	8.5	8
Pensacola, Fla.	9.5	8.5	*9.5	8
Tampa, Fla.	10	....	8.5	8

*Taxes: In tax column are included these city and county gasoline taxes: Mobile, 2c city; Birmingham, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have 1c kerosine tax, Mississippi 0.5c, not included in above prices.

†Consumer t.w. prices are same as net dealer prices.

S. O. Indiana

Red Crown (*Regular Grade*)
Blue Crown (*Third Grade*)
Dealer Prices

	Red Crown Cons. T.W	Red Crown	Blue Crown	Gasoline Taxes	Kerosine T.W.
Chicago, Ill.	10.9	8.9	8.4	4.5	10.3
Decatur, Ill.	9.1	7.1	7.1	4.5	9.5
Joliet, Ill.	11.9	9.6	8.5	4.5	10.3

(Continued on next page)

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:
Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 24 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.
Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect June 8, 1942 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. Indiana (Cont'd)

Red Crown (*Regular Grade*)
Blue Crown (*Third Grade*)

Dealer Prices

	Red Crown Cons. Red T.W.	Red Crown Blue Crown	Gaso-line Taxes	Kero-sine T.W.
Peoria, Ill.	10.7	9.2	9.1	4.5	10.1
Quincy, Ill.	8.9	7.9	7.9	4.5	10
Indianapolis, Ind.	11.6	9.7	9.6	5.5	*9.8
Evansville, Ind.	11.4	9.9	7.9	5.5	*9.6
South Bend, Ind.	12	10.5	10	5.5	*10.2
Detroit, Mich.	11.4	9.9	9.4	4.5	9.6
Grand Rapids, Mich.	11.4	9.3	9	4.5	9.6
Saginaw, Mich.	11.4	9.9	9.4	4.5	9.6
Green Bay, Wis.	12.2	10.7	9.7	5.5	10.6
Milwaukee, Wis.	12.1	10.6	10.1	5.5	10.5
La Crosse, Wis.	11.9	10.4	9.9	5.5	10.3
Minneapolis-St. Paul.	11.9	9.9	9.5	5.5	10.3
Duluth, Minn.	12.2	10.7	10.2	5.5	10.6
Mankato, Minn.	11.9	10.4	9.5	5.5	10.3
Des Moines, Ia.	11.4	9.9	9.4	4.5	*9.8
Davenport, Ia.	11.7	10.2	9.7	4.5	*10.1
Mason City, Ia.	11.7	10.2	9.7	4.5	*10.1
St. Louis, Mo.	10.3	8.8	8.6	*4.5	9.8
Kansas City, Mo.	10.4	8.9	7.9	*4.5	9.4
St. Joseph, Mo.	9	9	8	*4.5	9.6
Fargo, N. D.	12.9	11.4	10.5	5.5	11.3
Huron, S. D.	12.3	10.8	10.3	5.5	10.7
Wichita, Kans.	10.3	8.2	6.5	4.5	8

Stanavo Aviation 73 Octane

Chicago, Ill.	15.7		4.5
Milwaukee, Wis.	15.9		5.5
Minneapolis, Minn.	15.7		5.5
St. Louis, Mo.	15.2		*4.5
Kansas City, Mo.	14.8		*4.5
Fargo, N. D.	16.7		5.5
Huron, S. D.	16.1		5.5

	Oleum Spirits	V.M.&P. Naphtha	Stani-sol	*Taxes
	(Prices are base prices before discounts)			
Chicago,	13.5	13.8	12.8	4.5
Detroit	15.8	15	16.3	4.5
K. C., Mo.	13.3	14.3	13.8	1.5
St. Louis, Mo.	13.7	14.7	13.2	1.5
Milwaukee	14.4	15.4	14.9	5.5
Minneap'lis	14.2	15.2	13.5	5.5

Fuel Oils T. W.

	Chicago Standard Heater Oil
1-99 gals.	9
100-149 gals.	8
150 gals. & over	7.5

	Stanolex Fuel Oil No. 1	Stanolex Furnace Oil
1-99 gals.	8.5	8.5
100-149 gals.	7.5	7.5
150-399 gals.	7.5	7.5
400 gals. & over	7	7

	Stanolex Fuel Oil A	Stanolex Fuel Oil B
1-99 gals.	8	8
100-399 gals.	7	7
400-749 gals.	6	6
750 gals. & over	5.25	5.25

	Stanolex Bunker C Fuel Oil
1-399 gals.	6.5
400-999 gals.	5.5
1000 gals. & over	4.5

Other Points: Indianapolis	Stanolex No. 1	Stanolex Furnace Oil
1-99 gals.	....	*8.7
100 gals. & over	....	*7.7
Detroit		
1-99 gals.	....	7.8
100 gals. & over	....	6.8
Milwaukee		
1-99 gals.	....	8.7
100 gals. & over	....	7.7
Minneapolis		
1-99 gals.	....	8.5
100 gals. & over	....	7.5
St. Louis		
1-99 gals.	8.3	7.8
100 gals. & over	7.3	6.8
Kansas City		
1-99 gals.	....	7.6
100 gals. & over	....	6.6

*Taxes: In gasoline tax column are included these city taxes—Kansas City, St. Joseph, and St. Louis, 1c. Indiana kerosine and fuel oil prices are ex 4c state tax; Iowa kerosine prices are ex 3c state tax. In naphtha tax column are included 1.5c federal tax and state taxes.

S. O. Nebraska

(*Regular Grade*)

	T.W. Dealer	Gaso-line Taxes	Kero-sine T.W.
Omaha	11.4	8.9	6.5	9.8
McCook	10.5	9.4	6.5	9
Norfolk	11.9	10.4	6.5	10.3
North Platte	11	9.9	6.5	10
Scottsbluff	12.4	9.5	6.5	9.5

S. O. Louisiana

Esso Gasoline (*Regular Grade*)

	Consumer Tank Wagon	Dealer T.W.	Gaso-line Taxes	Kero-sine T.W.
New Orleans, La.	8.75	9.25	8.5	*9
Baton Rouge, La.	8.75	9.25	8.5	*9.5
Alexandria, La.	8.75	9.25	8.5	*9.5
Lafayette, La.	9	9.5	8.5	*9
Lake Charles, La.	9	9.5	8.5	*11
Shreveport, La.	8.5	9	8.5	*8
Knoxville, Tenn.	11.5	12	8.5	12.5
Memphis, Tenn.	8.75	9.25	8.5	10.5
Chattanooga, Tenn.	10.5	11	8.5	11
Nashville, Tenn.	10.5	11	8.5	10
Bristol, Tenn.	10.95	11.45	8.5	12
Little Rock, Ark.	9.5	10	8	10

*Louisiana kerosine prices are ex 1c state tax.
Discounts:
Esso Gasoline—To undivided dealers, 0.5c off dealer t.w.

Humble Oil & Refining Co.

Humble Motor Fuel (*Regular Grade*)
Thriftane (*Third Grade*)

	Humble *Tank Wagon	Humble Re-tail	Thriftane *Tank Wagon	Thriftane Re-tail	Gaso-line Taxes
Dallas, Tex.	8.5†	10.5	7.5†	8.5	5.5
Ft. Worth, Tex.	8.5††	10.5	7.5‡	9	5.5
Houston, Tex.	8.5	12.5	7.5	10.5	5.5
San Antonio, Tex.	8.5	12.5	7.5	10.5	5.5

	Kerosine *Tank Wagon	Kerosine Retail
Dallas, Tex.	7	11
Ft. Worth, Tex.	7	11
Houston, Tex.	8	11
San Antonio, Tex.		10

	Tank Car
74 Oct. Aviation Gasoline, Clear FOB Baytown, Tex.	8.5

*To all classes of dealers & consumers.
†Less 1c allowance to dealers only.
‡Less 1½c allowance to dealers only.
††Less 2c allowance to dealers only.

The Texas Co.

	Gasoline—Dealer T.W. Fire-Chief (*Regular*)	Indian (*3rd Grade*)	Gaso-line Taxes
Dallas, Tex.	8.5*	7.5*	5.5
Ft. Worth, Tex.	8.5†	7.5**	5.5
Wichita Falls, Tex.	8.5	7.5	5.5
Amarillo, Tex.	8.5	7.5	5.5
Tyler, Tex.	8.5*	7.5*	5.5
El Paso, Tex.	9.5	8.5	5.5
San Angelo, Tex.	8.5	7.5	5.5
Waco, Tex.	8*	7*	5.5
Austin, Tex.	8.5	7.5	5.5
Houston, Tex.	8.5	7.5	5.5
San Antonio, Tex.	8.5	7.5	5.5
Port Arthur, Tex.	8.5	7.5	5.5

*Less 1c temporary allowance to all dealers.
**Less 1.5c temporary allowance to all dealers.
†Less 2c temporary allowance to all dealers.

Continental Oil Co.

(N.B. Prices are Continental's "structural" prices. Prices do not reflect temporary reductions made to meet local competition).

	Conoco Bronz-z-z (*Regular*) †Tank Wagon	De-mand (*3rd Grade*)	Gaso-line Taxes	Kero-sine T.W.
Denver, Col.	11	10	5.5	11
Grand Junction, Col.	12	11	5.5	12
Pueblo, Col.	10.5	9.5	5.5	10.5
Casper, Wyo.	11.5	10.5	5.5	12
Cheyenne, Wyo.	11	10	5.5	11.5
Billings, Mont.	12.5	11.5	6.5	12.5
Butte, Mont.	13.5	12.5	6.5	13.5
Great Falls, Mont.	12.5	11.5	6.5	12.5
Helena, Mont.	13	12	6.5	13
Salt Lake City, Utah.	13.5	12.5	5.5	14.5
Boise, Ida.	14.1	13.1	6.5	16.5
Twin Falls, Ida.	15.6	14.6	6.5	17
Albuquerque, N. M.	10.5	9.5	*7	10
Roswell, N. M.	10	9	*7	9.5
Santa Fe, N. M.	10.5	9.5	*7.5	10
Ft. Smith, Ark.	9.5	9.25	*7	9.5
Texarkana, Ark.	9	8	*5.5	9
Muskogee, Okla.	9.5	8.5	7	8.5
Oklahoma City, Okla.	9.5	8.5	7	8.5
Tulsa, Okla.	9.5	8.5	7	8.5

*Taxes: In gasoline tax column are included these city taxes—Albuquerque, & Roswell, 0.5c; Santa Fe, 1c. Texas 4c state tax applies within city limits of Texarkana, Ark.; Okla. 5.5c state applies within city limits of Ft. Smith, Ark.
†To consumers & dealers.

S. O. California

Standard Gasoline (*Regular Grade*)
Flight Gasoline (*Third Grade*)

	Standard Posted Net Tank Truck	Standard Posted Re-tail	Flight Posted Net Tank Truck	Flight Posted Re-tail	Gaso-line Taxes
San Francisco, Cal.	10	14	9	12	4.5
Los Angeles, Cal.	9.5	13.5	8.5	11.5	4.5
Fresno, Cal.	11	15	10	13	4.5
Phoenix, Ariz.	12	16	10	13	6.5
Reno, Nev.	12	16	11	14	5.5
Portland, Ore.	10.5	14.5	9.5	12.5	6.5
Seattle, Wash.	10.5	14.5	9.5	12.5	6.5
Spokane, Wash.	12.5	16.5	11.5	14.5	6.5
Tacoma, Wash.	10.5	14.5	9.5	12.5	6.5

Std. Aviation 73

	Posted Net Tank Truck	Gasoline Taxes	Kerosine Tank Truck
San Francisco, Cal.	12.5	4.5	11.5
Los Angeles, Cal.	12	4.5	10
Fresno, Cal.	13.5	4.5	12.5
Phoenix, Ariz.	14.5	6.5	12.5
Reno, Nev.	14.5	5.5	13.5
Portland, Ore.	13	6.5	13.5
Seattle, Wash.	13	6.5	13.5
Spokane, Wash.	16	6.5	16.5
Tacoma, Wash.	13	6.5	13.5

Resale & Commercial: T.C. deliveries 0.25c per gal. off posted net tank truck.

Commercial: Retail deliveries, and /or tank truck deliveries of less than 40 gals., 4c per gal. above posted net tank truck price for Standard Aviation and Standard Gasoline, and 3c per gal. above posted net tank truck for Flight Gasoline, except single deliveries, of less than 40 gals. to Marine trade only, which are billed at posted net tank truck price.

Canada

PRICES ON IMPERIAL OIL, LTD.

Per Imperial Gallon, which is 1.2 U. S. Gallons

3-Star Imperial Gasoline (*Regular Grade*)

	†Gasoline T.W.	*Gasoline Taxes	†Kero-sine T.W.
Hamilton, Ont.	17.5	11	18
Toronto, Ont.	17.5	11	18
Brandon, Man.	21	10	23
Winnipeg, Man.	20.5	10	22.5
Regina, Sask.	18	10	20
Saskatoon, Sask.	20.8	10	22.8
Edmonton, Alta.	18.9	10	20.9
Calgary, Atla.	16	10	18
Vancouver, B. C.	15	10	24
Montreal, Que.	17	11	17.5
St. John, N. B.	16.5	13	19
Halifax, N. S.	16.5	13	19

*Includes 3c Federal, and Provincial taxes.
†To divided & undivided dealers.

Tank Wagon Price Changes

(These changes have been made in price tables)

The Texas Co.—Fire Chief Gasoline: Temporary allowance to dealers at Fort Worth increased from 1c to 2c, May 29.

The Texas Co.—Indian Gasoline: Temporary allowance to dealers at Fort Worth increased from 1c to 1.5c, May 29.

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:
Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 25 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.
Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

CRUDE OIL PRICES

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown

EASTERN & CENTRAL STATES FIELDS

PENNSYLVANIA GRADE

Posted by Jos. Seep Purch. Agency (Mar. 26, '42)

Bradford-Allegany	$3.00
Southwest Penna.	$2.65
Eureka (West Va.)	$2.59
Corning, O. (May 27, '41)	$1.31

Posted by The Pennzoil Co. (Mar. 26, '41)

National Transit	$2.93*

Posted by Valvoline Pipe Lines (Mar. 26, '42)

Bradford (Elk & McKean Counties, Pa.)	$3.00
Warren, Forest, Venango, Clarion & Butler Counties, Pa.	$2.93
Alleghany, Beaver, Washington & Greene Counties, Pa.	$2.65
West Virginia	$2.59
Southeastern Ohio	$2.55

*Applies to Cochran, Franklin, Hamilton & Doolittle districts; prices in other lower districts range down to $2.88 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co. (May 27, '41)

Midland, Midland County	$1.44
Sherman	$1.39

Posted by Simrall Corp. (May 27, '41)

Greendale, Porter, Vernon, Crystal & Wise	$1.44
Buckeye, Bentley, Edenville, Beaverton & Monitor (sweet crude type)	$1.42
Freeman, Redding, Lincoln & Winterfield	$1.39
West Branch-Arenac	$1.24
Hamilton-Grout	$1.29

Posted by Sohio Corp. (Mich. Div.)

Traverse crude in Allegan, Kent, Ottawa & Van Buren Cos. (June 2, '41)	$1.45
Trenton crude, Monroe Co. (June 2, '41)	$1.39

Posted by Bay Pipe Line Corp. (May 27, '41)

Saginaw & Wise	$1.44	Buckeye, Bentley & Kawkawlin	$1.42
Clare	$1.11	Adams (June 1, '41)	$1.27

ILLINOIS-INDIANA-KENTUCKY-OHIO

Posted by Sohio Corp. (May 21, '41)

Illinois Basin, including Griffin pool	$1.37
Carmi, Storms, Ill. area	$1.32
Birk City, Ky. area	$1.32
Corydon, Ky. area, Henderson	$1.32

Posted by Ohio Oil Co. (May 21, '41)

Illinois Basin	$1.37
Eastern Ill. & Western Ind.	$1.22

Posted by Carter Oil Co. (May 21, '41)

Loudon, Fayette Co. Ill.	$1.37

Posted by Mohawk Oil Lines, Inc. (May 21, '41)

Southern Illinois	$1.37

Posted by Ashland Oil & Transp. Co.

Somerset oil in Ash. Lines, Ky.; (June 19, '41)

Big Sandy River	$1.38	Kentucky River	$1.43

Posted by Ownesboro-Ashland Co.

Owensboro, Ky. area (May 21, '41)	$1.32

Posted by S. O. Ohio (Sept. 1, '41)

Lima, Ohio	$1.25
Cleveland, Lodi & Chatham (O). areas	$1.30

MID-CONTINENT

OKLAHOMA-KANSAS-NORTH TEXAS

(See below for companies posting and dates)

Gravity	Schedule No. 1	Schedule No. 2	Schedule No. 3
Below 21	$0.85	$0.75	$0.81
21-21.9	.87	.78	.83
22-22.9	.89	.81	.85
23-23.9	.91	.84	.87
24-24.9	.93	.87	.89
25-25.9	.95	.90	.91
26-26.9	.97	.93	.93
27-27.9	.99	.96	.95
28-28.9	1.01	.99	.97
29-29.9	1.03	1.02	.99
30-30.9	1.05	1.05	1.01
31-31.9	1.07	1.07	1.03
32-32.9	1.09	1.09	1.05
33-33.9	1.11	1.11	1.07
34-34.9	1.13	1.13	1.09
35-35.9	1.15	1.15	1.11
36-36.9	1.17	1.17	1.13
37-37.9	1.19	1.19	1.15
38-38.9	1.21	1.21	1.17
39-39.9	1.23	1.23	1.19
40 & above	1.25	1.25	1.21

Above schedules posted by:

No. 1: **S. O. Indiana** May 20, '41 in Okla. & Kans. **Sinclair-Prairie** May 20, '41 in Okla. & Kans. beginning with 25-25.9. **Continental** May 19, '41 in Okla. & Kans. beginning with Below 29 at $1.01. **Texaco** May 19, in Okla. & Kans. beginning with 28-28.9.

No. 2: **Carter** May 20, '41 in Okla. **Shell** Dec. 5, '41 in Okla. & Kans. **Magnolia** May 21, '41 in Okla.

No. 3: All Dec. 11, '41: **Stanolind & Continental** in N. Tex. **Sinclair-Prairie** in N. Central Tex. **Magnolia & Texaco** in N. & N. Central Tex. **Continental, Magnolia & Sinclair-Prairie** schedules begin with Below 29 at $0.97. **Texaco** schedule begins with 28-28.9.

TEXAS & NEW MEXICO FIELDS

Posted by Humble Oil & Refining Co.

(May 21, '41, except Panhandle, Tex. July 9, '41 and W. Central Texas Dec. 11, '41)

Gravity	Refugio	Texas Gulf Coast	Miran-do	Ana-huac	Dick-inson	East Central Texas	West Central Texas	Pan-handle, Texas	W. Texas & New Mex.	Hawkins Texas
Below 20	$1.08	$1.06	$1.03	$0.98	$0.93	....	....	$0.73	$0.70	$0.80
20-20.9	1.10	1.08	1.05	1.00	.95	....	....	.75	.72	.82
21-21.9	1.12	1.10	1.07	1.02	.97	....	....	.77	.74	.84
22-22.9	1.14	1.12	1.09	1.04	.99	....	....	.79	.76	.86
23-23.9	1.16	1.14	1.11	1.06	1.01	....	....	.81	.78	.88
24-24.9	1.18	1.16	1.13	1.08	1.03	....	....	.83	.80	.90
25 & above	....	....	....	....	....	....	....	....	....	.92
25-25.9	1.20	1.18	1.15	1.10	1.05	$0.97	$0.91	.85	.82	....
26-26.9	1.22	1.20	1.17	1.12	1.07	.99	.93	.87	.84	....
27-27.9	1.24	1.22	1.19	1.14	1.09	1.01	.95	.89	.86	....
28-28.9	1.26	1.24	1.21	1.16	1.11	1.03	.97	.91	.88	....
29-29.9	1.28	1.26	1.23	1.18	1.13	1.05	.99	.93	.90	....
30-30.9	1.30	1.28	1.25	1.20	1.15	1.07	1.01	.95	.92	....
31-31.9	1.32	1.30	1.27	1.22	1.17	1.09	1.03	.97	.94	....
32-32.9	1.34	1.32	1.29	1.24	1.19	1.11	1.05	.99	.96	....
33-33.9	1.36	1.34	1.31	1.26	1.21	1.13	1.07	1.01	.98	....
34-34.9	1.38	1.36	1.33	1.28	1.23	1.15	1.09	1.03	1.00	....
35-35.9	1.40	1.38	1.35	1.30	1.25	1.17	1.11	1.05	1.02	....
36-36.9	1.42	1.40	1.37	1.32	1.27	1.19	1.13	1.07	1.04	....
37-37.9	1.44	1.42	1.39	1.34	1.29	1.21	1.15	1.09	1.06	....
38-38.9	1.46	1.44	1.41	1.36	1.31	1.23	1.17	1.11	1.08	....
39-39.9	1.48	1.46	1.43	1.38	1.33	1.25	1.19	1.13	1.10	....
40 & above	1.50	1.48	1.45	1.40	1.35	1.27	1.21	1.15	1.12	....

Refugio: Includes crude purchased in East White Point, Greta, Melon Creek, O'Connor-McFaddin, Plymouth, Saxet, Taft, & Tom O'Connor fields.

Texas Gulf Coast: Includes crude purchased in Amelia, Clear Lake, Goose Creek, Hastings, Magnet, Mykawa, Mykawa New, Raccoon Bend, South Thompsons, Sugarland, Thompsons, & Webster fields.

Mirando: Includes crude purchased in Blanchard, Bridwell, Colorado, Comitas, Eagle Hill, Escobas, Fitzsimmons, Glen,Government Wells (North & South), Heyser, Hoffman, Kelsey, Kohler, Loma Novia, Lundell, Manilla, Mirando Valley, Placedo, Randado, Sarnosa, & Tesoro fields.

Anahuac: Includes crude purchased in Anahuac, Angleton, Cedar Point, Fishers' Reef, Hull, (Old & New), Pierce Junction, Red Fish Reef, & Turtle Bay fields.

Dickinson: Includes crude purchased in Dickinson, Gilloc, Hardin, League City, & Rowan fields.

East Central Texas: Includes crude purchased in Anderson, Cherokee, Limestone, & Navarro Counties, and Navarro Crossing field.

West Central Texas: Includes crude purchased in Brown, Callahan, Comanche, Eastland, Fisher, Haskell Jones, Shackelford, Stephens, & Throckmorton Counties.

Panhandle, Texas: Includes crude purchased in Carson, Gray, Hutchinson & Wheeler Counties.

West Texas & New Mexico: Includes crude purchased in Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler, & Yoakum Counties, Texas; Lea County, N. M.

Hawkins: Includes crude purchased in Hawkins Field, Wood County, Texas.

Conroe	$1.43	**East Texas & Flag Lake**	$1.25	**Clark, Zoboroski**	$1.14
Tomball	1.40	**Flour Bluff, E. Flour Bluff**	1.33	**Alice, Benavides (N. Sweden), Sun**	1.35
Van	1.08	**Salt Flat, N. Salt Flat**	1.14	**Ben Bolt, Clark-Muil, Tom Graham**	1.35
Talco	0.79	**Darst Creek, Hilbig, Carroll**	1.14	**Yates (Pecos)**	0.95
				La Rosa	1.33

MAGNOLIA PETROLEUM CO.

(May 21, '41)

Panhandle, Tex.—(July 9, '41)—Same as Humble except Magnolia begins with below 29 at $0.91.

West Texas—In Crane, Upton, Howard, Glasscock, Mitchell, Winkler, Cochran, Hockley, Yoakum & Gaines Cos., and in Pecos & Andrews Cos. beginning Apr. 1, '42—Same as Humble except Magnolia begins with Below 25 at $0.80.

N. Mexico—In Lea Co.—Same as Humble except Magnolia begins with Below 25 at $0.88 & ends with 36 & above at $1.04.

Cass & Panola Cos., Tex.—Below 25 at $0.88, plus 2c per degree of gravity to 40 & above at $1.20.

Mirando, Tex.—Same as Humble.

East Texas	$1.25	**Lytton Springs**	$1.17
Darst Creek	1.14	**Cleveland-Liberty Co.**	1.26
Luling	1.05	**Tomball**	1.40
Talco	.79		

SINCLAIR-PRAIRIE OIL MARKETING CO.

Texas Panhandle—(May 23, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.83.

West Texas & New Mexico—(May 30, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.80.

Texas Gulf Coast—(May 21, '41)—Same as Humble.

Mexia District, Texas—(May 30, '41)—Same as Humble, East Central Texas, except Sinclair-Prairie also posts Below 25 at $0.95.

East Texas—(May 21, '41)	$1.25
Long Lake, Texas—(May 21, '41)	$1.23
Chapel Hill (Washington Co.) Tex.:	
Below 50 grav. (Jan 20, '42)	$1.18
50 grav. & above (Feb. 2, '42)	$1.25

STANOLIND OIL PURCHASING CO.

(May 21, '41)

Clinton, Tex.—Same as Humble Tex. Gulf Coast except Stanolind begins with Below 21 at $1.08.

Fairbanks, N. Houston & Rosslyn, Tex.—Same as Humble Dickinson schedule.

Lake Creek, Tex.—(Apr. 9, '42)—Same as Humble Tex. Gulf Coast except Stanolind begins with Below 21 at $1.08.

E. Texas—$1.25 **Satsuma & Tomball, Tex.**—$1.40

STANOLIND OIL & GAS CO.

(May 21, '41)

W. Beaumont & Spindletop (Jefferson Co., Tex.) **& High Island** (Galveston Co., Tex.)—Same as Humble Tex. Gulf Coast.

Hendrick & Henderson (Winkler Co., Tex.)—Same as Humble West Texas except Stanolind begins with Below 26 at $0.82.

Jay Welder (Calhoun Co., Tex.)—Nov. 14, '41—Same as Humble Anahuac.

THE TEXAS CO.

(May 21, '41)

Panhandle, Tex.—Same as Humble except Texaco begins with 34-34.9 at $1.03.

W. Texas & Lea Co., N. M.—Same as Humble except Texaco posts $0.78 for 23.9 & below and ends with 36 & above at $1.04.

Texas Gulf Coast—Same as Humble except Texaco ends with 34 & above at $1.36.

Duval, Mirando, Tex.—Same as Humble Mirando except Texaco ends with 28-28.9 at $1.21.

Refugio, Tex.—Same as Humble except Texaco ends with 28-28.9 at $1.26.

East Texas	$1.25	**Conroe, Tex.**	$1.43
Darst Creek, Tex.	$1.14	**Hockley & Cochran Cos., Tex.**	.87

SHELL OIL CO., INC.

(May 20, '41)

West Texas & Lea Co., N. M.—Same as Humble except Shell ends with 36 & above at $1.04.

Fisher Co., Tex.—(Dec. 11, '41)—Same as Humble W. Central Texas except Shell begins with Below 25 at $0.89.

East Texas	$1.25
Livingston field, Polk Co., Tex.	$1.25
Pecos Co., Texas, (except Yates Shallow Pool)	.95
Pecos Co., Tex., Yates Shallow Pool	.82
Mercy field, San Jacinto Co., Tex. (Feb. 27, '42)	1.25

CONTINENTAL OIL CO.

Carson & Hutchinson Cos., Tex.—(July 9, '41)—Same as Humble Panhandle except Continental begins with Below 29 at $0.91.

Mirando, Tex.—(July 1, '41)—Same as Humble.

Wade City & Clara Driscoll, Tex.—(July 1, '41)—Same as Humble Refugio.

Alfred & Magnolia City, Tex.—(May 21, '41), $1.35

Eddy Co., N. M.—(May 30, '41)—Same as Humble N. M. schedule except Continental begins with Below 29 at $0.88.

PAN AMERICAN PRODUCTION CO.

(May 21, '41)

Hastings & S. Houston, Tex.—Same as Humble Tex. Gulf Coast except Pan Am. begins with Below 21 at $1.08.

Gillock, Tex.—Same as Humble Dickinson except Pan Am. begins with Below 21 at $0.95.

East Texas	$1.25
Cayuga, Tex.	.90
Goodrich, Tex. (Dec. 1, '41)	1.20

CRUDE OIL PRICES

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown.

CALIFORNIA

Posted by S. O. California, May 23, 1941

(All gravities above those quoted take highest price offered in that field)

Gravity	Signal Hill (Long Beach)	Wilmington	El Segundo	Seal Beach	Huntington Beach	Inglewood	Olinda Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley, Canal, Wasco	Colea Levee	Mountain View	Elk Hills, Buena Vista Hills Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Gravity
14-14.9	....	$0.68	....	....	$0.71	....	$0.70	....	$0.70	$0.70	$0.70	$0.72	....	....	....	....	....	$0.73	$0.73	$0.73	14-14.9
15-15.9	....	.71	....	....	.75	$0.76	.72	....	.72	.71	.72	.72	....	....	....	....	....	.73	.73	.73	15-15.9
16-16.9	....	.74	$0.79	....	.79	.79	.75	....	.74	.73	.75	.72	....	....	....	....	....	.73	.75	.73	16-16.9
17-17.9	....	.78	.82	....	.82	.82	.78	....	.77	.76	.78	.72	....	....	....	....	....	.75	.78	.73	17-17.9
18-18.9	$0.80	.82	.86	....	.86	.85	.81	....	.80	.79	.82	.74	....	....	....	....	....	.78	.81	.73	18-18.9
19-19.9	.84	.86	.90	....	.89	.88	.85	....	.83	.82	.85	.77	....	....	....	....	$0.73	.81	.84	.75	19-19.9
20-20.9	.88	.90	.94	....	.93	.92	.88	....	.86	.85	.89	.80	....	....	....	....	.76	.85	.87	.77	20-20.9
21-21.9	.92	.94	.98	....	.96	.95	.91	....	.89	.89	.92	.84	....	....	....	....	.79	.90	.90	.80	21-21.9
22-22.9	.96	.98	1.02	$0.88	.99	.98	.95	....	.93	.93	.96	.87	....	....	....	....	.83	.94	.93	.83	22-22.9
23-23.9	1.00	1.02	1.05	.92	1.02	1.01	.98	....	.97	.98	1.00	.91	....	....	....	....	.87	.99	.96	.86	23-23.9
24-24.9	1.03	1.06	1.07	.97	1.05	1.04	1.01	....	1.01	1.02	1.03	.94	$0.99	....	....	....	.90	1.03	.99	.89	24-24.9
25-25.9	1.07	1.09	1.10	1.01	1.08	1.07	1.04	....	1.05	1.06	1.07	.98	1.02	....	....	....	.94	1.07	1.01	.92	25-25.9
26-26.9	1.11	1.12	1.12	1.06	1.11	1.10	1.08	....	1.09	1.10	1.11	1.01	1.06	....	....	....	.97	1.11	1.04	.95	26-26.9
27-27.9	1.15	1.15	1.15	1.10	1.14	1.14	1.11	....	1.13	....	1.15	1.05	1.10	$1.04	....	....	1.01	1.15	1.07	.98	27-27.9
28-28.9	1.18	1.18	1.17	1.15	1.17	1.17	1.14	....	1.17	....	....	1.08	1.13	1.08	....	....	1.04	1.19	1.10	1.00	28-28.9
29-29.9	1.20	1.21	....	1.19	1.20	1.20	....	$1.17	....	....	....	1.12	1.17	1.12	....	....	1.07	1.24	1.13	1.02	29-29.9
30-30.9	1.23	1.24	....	....	1.23	1.22	....	1.21	....	Elwood	....	1.15	1.21	1.15	$1.01	$1.09	1.10	1.28	1.16	1.04	30-30.9
31-31.9	....	....	....	....	....	1.24	....	1.25	....	Terrace	....	1.19	1.24	1.19	1.04	1.12	1.14	....	....	1.06	31-31.9
32-32.9	....	....	....	....	....	....	....	1.29	....	F.o.b. Ship	....	1.23	1.28	1.23	1.07	1.14	1.17	....	....	1.09	32-32.9
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.22	....	1.27	....	1.26	1.10	1.17	....	....	....	1.11	33-33.9
34-34.9	Kettleman Hills			....	....	....	....	1.36	....	1.25	....	1.31	....	1.30	1.13	1.20	....	....	....	1.13	34-34.9
35-35.9	....	$1.23	....	....	....	....	....	....	....	1.28	....	1.35	....	....	1.16	1.22	....	....	....	....	35-35.9
36-36.9	....	1.26	....	....	....	....	....	....	....	....	....	1.39	....	....	1.19	1.25	....	....	....	....	36-36.9
37-37.9	....	1.29	....	....	....	....	....	....	....	....	....	1.43	....	....	1.22	....	....	....	....	....	37-37.9
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.47	....	....	1.25	....	....	....	....	....	38-38.9
39-39.9	....	....	....	....	....	....	....	....	....	....	....	1.51	....	....	....	....	....	....	....	....	39-39.9
40-40.9	....	....	....	....	....	....	....	....	....	....	....	1.53	....	....	....	....	....	....	....	....	40-40.9

Playa Del Rey: (FOB Standard Pipe Line) 20-20.9, $0.80; 21-21.9, $0.84; 22-22.9, $0.87.
Wheeler Ridge: 22-22.9, $0.76; 23-23.9, $0.80; 24-24.9, $0.83.
Newhall, Kern River, Kern Front, McKittrick & Round Mountain: 14-14.9, $0.73.

LOUISIANA-ARKANSAS

Posted by S. O. Louisiana, May 22, '41

Gravity	Atlanta, Ark. et al.	De Soto, La. et al.	Rodessa, La. et al.	Bunkie, La. et al.	Darrow, La. et al.	University, La. (Baton Rouge)
40 & Above	$1.08	$1.18	$1.20	$1.30	$1.30	....
39-39.9	1.06	1.16	1.18	1.28	1.28	....
38-38.9	1.04	1.14	1.16	1.26	1.26	....
37-37.9	1.02	1.12	1.14	1.24	1.24	....
36-36.9	1.00	1.10	1.12	1.22	1.22	....
35-35.9	.98	1.08	1.10	1.20	1.20	....
35 & above	....	....	....	....	....	$1.36
34-34.9	.96	1.06	1.08	1.18	1.18	1.34
33-33.9	.94	1.04	1.06	1.16	1.16	1.32
32-32.9	.92	1.02	1.04	1.14	1.14	1.30
31-31.9	.90	1.00	1.02	1.12	1.12	1.28
30 & below	....	....	....	....	....	1.26
30-30.9	.88	.98	1.00	1.10	1.10	....
29-29.9	.86	.96	.98	1.08	1.08	....
28-28.9	.84	.94	.96	1.06	1.06	....
27-27.9	.82	.92	.94	1.04	1.04	....
26-26.9	.80	.90	.92	1.02	1.02	....
25-25.9	.78	.88	.90	1.00	1.00	....
Below 25	....	.86	.88	.98	....	....
24-24.9	.76	....	.88	....	.98	....
23-23.9	.74	....	.86	....	.96	....
22-22.9	.72	....	.84	....	.94	....
21-21.9	.70	....	.82	....	.92	....
Below 21	.68	....	.80	....	.90	....

Atlanta schedule includes Buckner, Lewisville, Magnolia, Village & Schuler (Jones Sand), Ark.

De Soto schedule includes Sabine, Fouke, Homer, Miller co., Nebo & Sugar Creek.

Rodessa schedule includes Cotton Valley & Shreveport (Cross Lake) ending with Below 25 at $0.88; Anse La Butte (Aug. 1, '41); Caddo (Oct. 15, 1941).

Bunkie schedule includes Eola, Olla, South Olla, Pine Prairie (May 21, '42), and University (Baton Rouge) Deep Production (May 22, '42).

Darrow schedule includes Bayou Mallet, Choctaw, Jeanerette, Lirette, N. & S. Crowley, Port Allen, Port Barre, Potash, Roanoke, & St. Martinville.

Big Creek, Dorcheat, McKamie, Distillates (Sour) $1.15
Heavy Smackover Crude ..... .83
Cotton Valley Distillate (Sept. 1, '41) 1.40
Cotton Valley (Holloway Sand Crude) 1.25
Lisbon Distillate 1.20

(Continued next column)

LOUISIANA-ARKANSAS *(Cont'd)*

Posted by Shell Oil Co., Inc. (May 20, '41)

Gravity	Iowa	Roanoke	Gibson
Below 20	$0.99	$0.94	$0.89
20-20.9	1.01	.96	.91
21-21.9	1.03	.98	.93
22-22.9	1.05	1.00	.95
23-23.9	1.07	1.02	.97
24-24.9	1.09	1.04	.99
25-25.9	1.11	1.06	1.01
26-26.9	1.13	1.08	1.03
27-27.9	1.15	1.10	1.05
28-28.9	1.17	1.12	1.07
29-29.9	1.19	1.14	1.09
30-30.9	1.21	1.16	1.11
31-31.9	1.23	1.18	1.13
32-32.9	1.25	1.20	1.15
33-33.9	1.27	1.22	1.17
34 & above	1.29	1.24	1.19

Iowa schedule includes Black Bayou & White Castle La. fields.

Roanoke schedule includes Chalkley, La. field.

Gibson schedule includes S. Houma, Hester & W. Lake Verret, La. fields.

Happytown field, St. Martin Par., La. $1.15

Posted by Arkansas Fuel Oil Corp.
Urania, La. (May 22, '41) $1.15

Posted by Continental Oil Co. (May 21, '41)
Tepetate, La. $1.18
Ville Platte, La. 1.20
Lake Arthur, La. 1.18
Ritchie, La. (Sept. 1, '41) 1.08

Abbeville, La.

Below 36..$1.07	37-37.9...$1.11	39-39.9....$1.15
36-36.9... 1.09	38-38.9... 1.13	40 & above 1.17

CANADIAN FIELDS

Posted by Imperial Oil Limited
Western Ontario (Nov. 6, 1939)
Petrolia ..... $2.10 Oil Springs $2.17

Turner Valley Crude Oil (July 16, '41)
(Prices FOB producer's tankage)

33-33.9...$1.35	44-44.9...$1.57	55-55.9...$1.79
34-34.9... 1.37	45-45.9... 1.59	56-56.9... 1.81
35-35.9... 1.39	46-46.9... 1.61	57-57.9... 1.83
36-36.9... 1.41	47-47.9... 1.63	58-58.9... 1.85
37-37.9... 1.43	48-48.9... 1.65	59-59.9... 1.87
38-38.9... 1.45	49-49.9... 1.67	60-60.9... 1.89
39-39.9... 1.47	50-50.9... 1.69	61-61.9... 1.91
40-40.9... 1.49	51-51.9... 1.71	62-62.9... 1.93
41-41.9... 1.51	52-52.9... 1.73	63-63.9... 1.95
42-42.9... 1.53	53-53.9... 1.75	64 & over 1.97
43-43.9... 1.55	54-54.9... 1.77	

Absorption Gasoline (July 16, '41)
90% Rec., 20 lb. Reid v. p. $2.28
90% Rec., 17 lb. Reid v. p. 2.44

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co. (May 20, '41)
Salt Creek (except Tensleep crude), Midway & Dutton Creek, Wyo.

Below 29..$0.96	32-32.9...$1.04	36-36.9...$1.12
29-29.9... .98	33-33.9... 1.06	37-37.9... 1.14
30-30.9... 1.00	34-34.9... 1.08	38-38.9... 1.16
31-31.9... 1.02	35-35.9... 1.10	39-39.9... 1.18
		40 & above 1.20

Wyoming:		Wyoming:	
Tensleep Crude	$0.6785	Grass Creek Light	$1.00
Frannie Light	.70	Grass Creek Heavy	.50
Frannie Heavy	.47	Elk Basin	1.00
Hamilton Dome	.45	Iles, Colo.	1.07

Posted by Ohio Oil Co. (May 20, '41)
Elk Basin, Wyo. $1.00
Grass Creek Wyo., Light 1.00
Rock Creek, Wyo. 1.15
Lance Creek, Wyo., (July 1, '41) 1.12

Posted by Continental Oil Co. (May 21, '41)
Ft. Collins & Wellington, Col.

Below 29..$0.96	32-32.9...$1.04	36-36.9...$1.12
29-29.9... .98	33-33.9... 1.06	37-37.9... 1.14
30-30.9... 1.00	34-34.9... 1.08	38-38.9... 1.16
31-31.9... 1.02	35-35.9... 1.10	39-39.9... 1.18
		40 & above 1.20

Canon City & Florence, Col. $1.05	Big Muddy, Wyo., (May 30, '41)... $1.08
Cat Creek, Mont.. 1.15	Lance Creek, Wyo., (July 1, '41).... 1.12

Posted by Independent Pipe Line Co. (Aug. 1, '41)
Falls City, Neb., field price $0.90
Falls City, Neb., loaded in tank cars 0.95
Shubert, Neb., loaded in tank cars 0.97

SOUTHEASTERN FIELDS

Posted by Allied Pipe Line Corp.

Tinsley (Miss.) Crude (Oct. 16, '41)

24-24.9	$0.745	32-32.9	$0.905
25-25.9	.765	33-33.9	.925
26-26.9	.785	34-34.9	.945
27-27.9	.805	35-35.9	.965
28-28.9	.825	36-36.9	.985
29-29.9	.845	37-37.9	1.005
30-30.9	.865	38-38.9	1.025
31-31.9	.885	39-39.9	1.045
		40 & above	1.065

Pickens (Miss.) Crude (Dec. 16, '41)

24-24.9	$0.685	32-32.9	$0.845
25-25.9	.705	33-33.9	.865
26-26.9	.725	34-34.9	.885
27-27.9	.745	35-35.9	.905
28-28.9	.765	36-36.9	.925
29-29.9	.785	37-37.9	.945
30-30.9	.805	38-38.9	.965
31-31.9	.825	39-39.9	.985
		40 & above	1.005

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EXPERIENCED PLANT OPERATOR to take over small refinery—vacuum and pressure stills. Capable of arc and acetylene welding, record keeping, selling oil to fleet owners. Box 12, Rosslyn, Va.

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2-4000 Gallon Single Compartment Transports with Ford tractors. 5-4000 gallon single compartment with White Diesel engined tractors. G. E. Bobbitt, Raleigh, N. C., Box 1055—Phone 21680.

NEW 1942 WAYNE PUMPS, one Model 70 with remote control assembly, extenda hose, opaco nozzle; two Model 100 with opaco nozzles. Will sell for manufacturer's list. Address Box No. 115.

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1—Serial No. 768147, 5", 5 stage, 5" discharge, 6" suction. Name plate rating, 1000 GPM, 750 ft. Total Dynamic head, 1750 RPM, 300 HP.
1—Serial No. 736268—5", 5 stage, 5" discharge, 6" suction. Name plate rating, 1000 GPM, 750 ft. Total Dynamic head, 1750 RPM, 300 HP.

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Tulsa, Okla., 904 World Bldg., Telephone, 3-7132.

Los Angeles, 610-A Hillstreet Bldg., Telephone, VAndike 2845.

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PERSONALS

L. J. Connolly, secretary and treasurer, Continental Oil Co., Louisville, Ky., has resigned, according to **C. E. Bauer,** president. Mr. Connolly had served in this capacity since he, **Martin A. Bauer,** and **C. E. Bauer**, organized the company in 1925. Prior to 1925, he worked for the Crescent Oil Co. in Minneapolis—his birthplace. He served in World War I, and while stationed at Camp Taylor, Louisville, met the future Mrs. Connolly. After the war, he renewed his connection with Crescent.

* * *

Charles E. Foster

Charles E. Foster, vice-president of Cities Service Oil Co., was honored with a dinner attended by a large group of friends and business associates at the Essex Country Club, Essex Falls, N. J., June 7 in celebration of his forty years of service with the Cities Service organization.

Mr. Foster began his varied career as an employe of the St. Joseph Railway, Heat, Power and Light Co. After advancing to the position of Secretary and Treasurer, he was transferred to the oil division of Cities Service and became vice-president and general manager of the Crew Levick Co., a marketing subsidiary. In 1939, when the company's East Coast marketing facilities were consolidated, Mr. Foster was named vice-president in charge of all domestic marketing.

* * *

Irving J. Hancock

New president of the Petroleum Accountants Society, Los Angeles, is **Irving J. Hancock,** assistant controller of Union Oil Co. of California. He was elected on June 2 by society's board of directors and succeeds **D. A. Moore,** Wilshire Oil Co. Mr. Hancock has been with Union Oil for 26 years and has lived in Los Angeles for 39 years. Among his friends he is famous as a barbecue chef and a color photographer.

M. E. "Bones" Foster, Bartlesville, supplies co-ordinator for Phillips Petroleum Co., was elected chairman and secretary of the newly-formed board of governors of the Oklahoma Archery Assn. at its 13th annual tournament at Bartlesville.

Mrs. M. E. Foster won the women's championship in the William Tell shoot which **Eldon Frye,** editor of Phillips' houseorgan "Philnews", livened up by painting cardboard figures of comic strip characters and sticking apples on their heads for targets. Mrs. Foster placed her arrow almost dead center through the apple at 30 yards.

The 91 archers entered in the tournament were guests at Frank Phillips' Woolaroc lodge for a barbecue and business meeting.

* * *

C. L. Bailey, manager of the Huron, S. D., sales division of Indiana Standard, will retire on July 1. He joined the company in 1906 as agent at Howard, S. D.; became assistant manager when the Huron division was formed; was promoted to manager in 1926.

Following changes in personnel are also reported by Indiana Standard:

A. H. Worrell, manager at Saginaw, Mich., will succeed Mr. Bailey at Huron; **E. G. Rounds,** manager at Peoria, Ill., will succeed Mr. Worrell; **T. V. Warren,** manager at Des Moines, Iowa, will succeed Mr. Rounds; **J. W. Honomichl,** manager at Davenport, Iowa, will succeed Mr. Warren; **L. A. Day,** assistant manager at Davenport, will become an additional assistant manager at Mason City; **E. J. Stivers,** assistant manager at Fargo, N. D., will become additional assistant manager at Des Moines; **R. H. Patterson,** assistant manager at Minneapolis, will succeed Mr. Stivers; **J. C. Schadow,** assistant manager at Minneapolis, will succeed Mr. Patterson; **H. J. Hilliard,** sales manager at Green Bay, Wis., will be promoted to succeed Mr. Schadow; and **A. G. Pyles,** Davenport office manager, will be moved to same position at St. Joseph, Mo.

* * *

A. W. Walker, University of Texas law professor who is a recognized authority on the state's oil and gas laws, has gone into service with the Navy at New Orleans as a lieutenant, senior grade.

* * *

National Council of the Boy Scouts of America has honored **Frank Phillips,** Bartlesville, president of Phillips Petroleum Co., with 1942 Silver Buffalo Award for "distinguished service to boyhood".

Mary Sue Collins

Mary Sue Collins, Tulsa, charming and popular treasurer of Western Petroleum Refiners Assn., is now **Mrs. Lawrence D. Hibbs.**

The bride, daughter of the late **Mr. and Mrs. J. W. Collins,** of Haskell, Okla., and Austin, Texas, and the bridegroom, son of the late **Mr. and Mrs. Elmus H. Hibbs** of Metz, W. Va., were married in the home of the bride's brother and sister-in-law, **Dr. and Mrs. Bailey R. Collins,** in Wichita Falls, Texas.

Mrs. Hibbs plans to continue her present work with W.P.R.A.. Mr. Hibbs is an independent oil operator.

* * *

Friends of **David C. Reid,** president of David C. Reid Co., Inc., New York oil and ship brokerage, joined in extending him well-wishes and congratulations when he celebrated his 81st birthday June 5. Mr. Reid has seen many changes in the oil business since the days when he used to watch the old sailing ships entering New York harbor with oil barrels piled up to the main yard, but after 60 years in the shipping and oil business he is "still active and going strong."

* * *

J. Allen Lambright, Co-ordinator, Spartanburg county, S. C., Office of Civilian Defense, has passed on laurels to **James M. Zimmerman,** county Gulf jobber and chief of the Spartanburg auxiliary fire department. Mr. Zimmerman had his full force of defense volunteers on the job at the fire house a quarter-hour after the siren called the OCD to its first wartime "alert" on June 3.

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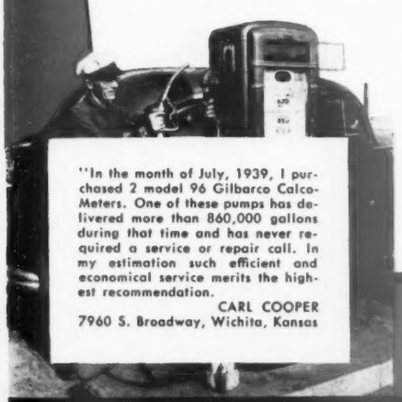

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